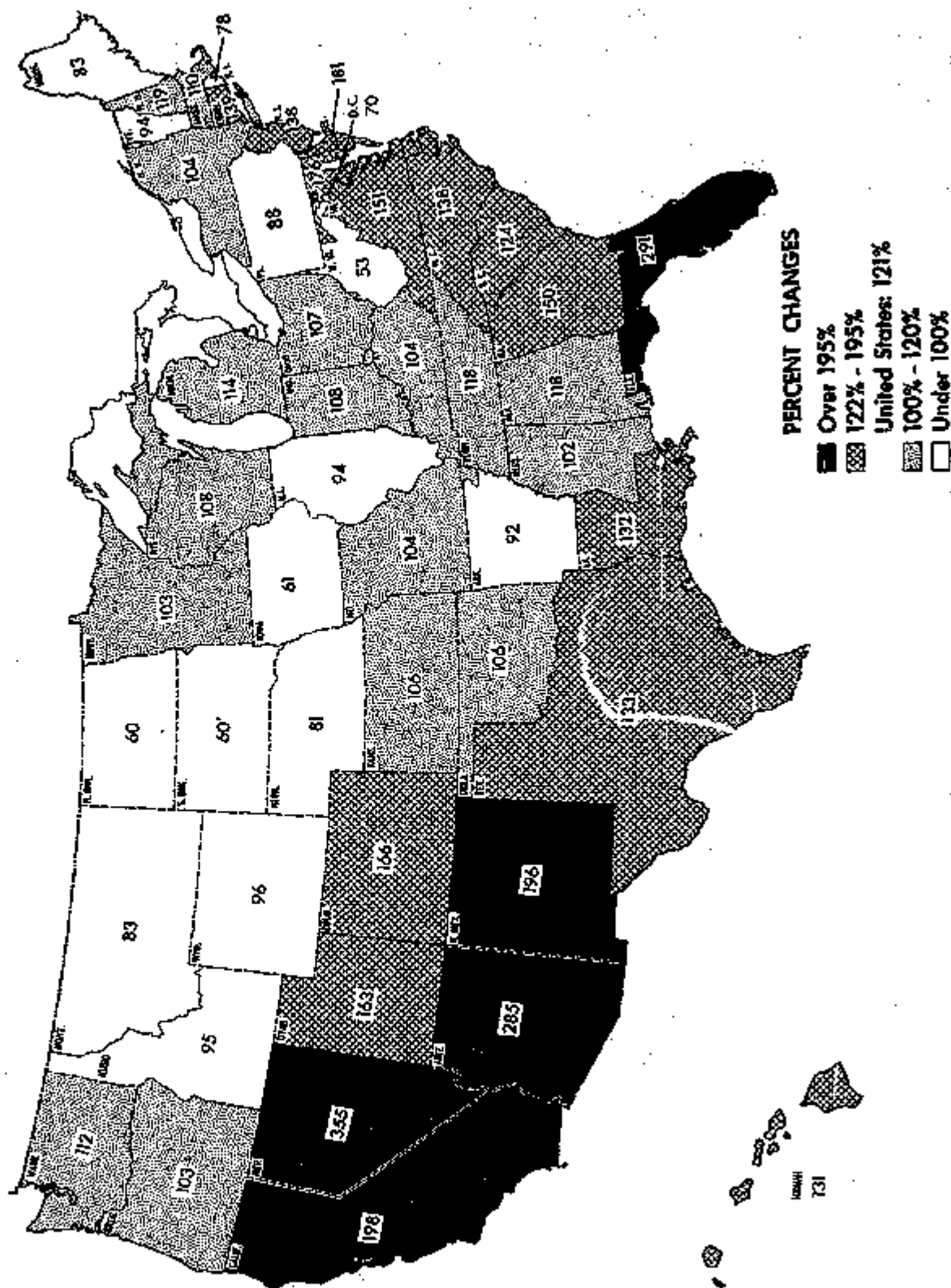


# PERCENT CHANGE IN TOTAL PERSONAL INCOME, 1948-63



## Factors Underlying Changes in the Geographic Distribution of Income

THE regional distribution of personal income has exhibited persistent trends over the past three and one-half decades. The shift of income from the North and East to the South and West, which characterized the 1920's, and which accelerated as the economy surged to full capacity during World War II, has continued over the past decade and a half. Since 1948, relative changes in the regional distribution of personal income have amounted to about \$22 billion. That is, individual income in the South and West is \$22 billion more and in the North and East \$22 billion less than would have been the case had all sections of the country grown at the same rate. This shift amounts to 5 percent of the personal income total of \$461 billion in 1963. By States, the amount redistributed is even larger, as there were some offsetting changes within regions.

This geographic shift in the distribution of personal income may be viewed as the net result of two types of economic forces. On the one hand, most individual industries in the southern and western regions expanded more rapidly than their counterparts in the North and East, a factor which increased total income in these areas at an above-average rate. On the other hand, the northern and eastern regions had a preponderance of those industries which, during the postwar period, were rapid-growers regardless of their geographic location; the two southern regions and the Rocky Mountain States tended to specialize in the slower growing types of industries. The effect of this difference in the "industry-mix" of the two areas offset a part of the change in total income due to the differential performance of

the areas on an industry-by-industry basis.

Accompanying these relative income shifts, and partly causing them, were varying rates of population growth in the regions. Generally, the population movement was to the Southwest and West with the Southeastern States benefiting to only a small extent.

With the geographic changes in population and income tending to move parallel, changes in per capita income since 1948 relative to that of the Nation have been small. Most changes that did occur continued the trend toward a lessening of regional differences in per capita income.

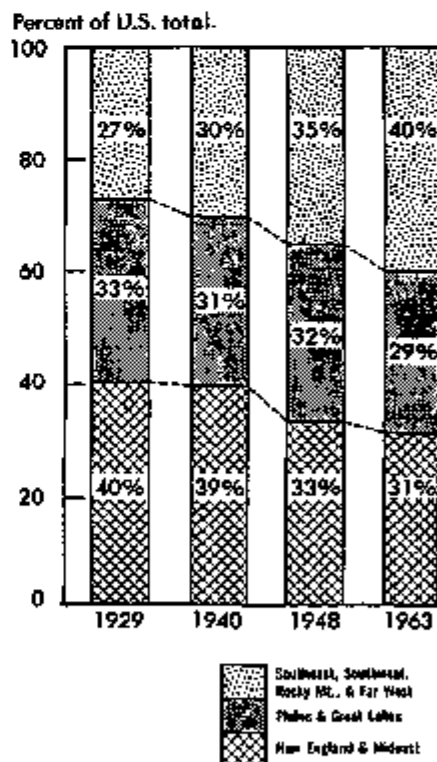
### Scope of report

This report is concerned with changes in the geographic distribution of income during the decade and a half since the completion of economic reconversion following World War II. Specifically, its purpose is to review trends in the geographic distribution of income and to analyze the industrial and population factors underlying these regional income trends for such light as they may shed on the future course of the various regional economies.

Before beginning an examination of postwar income shifts, a brief statement on definition and measurement of trend as employed here should be useful. The concept of trend is related to long-term growth or decline. It is characterized by regularity and persistency. To measure trend, it is necessary to separate the underlying long-term movement in a time series not only from the random, irregular factors but also from the effects of changes in the business cycle.

Since the focus of this article is on relative shifts in income, State and regional trends are measured here with total United States income as a standard of reference. Income in each State and region is expressed as a

REGIONAL DISTRIBUTION OF TOTAL PERSONAL INCOME



U.S. Department of Commerce, Office of Business Economics 64-4-5

percent of the national total, and trend is calculated in terms of changes in each area's share of the total—an increased or decreased share representing an upward or downward income trend relative to the Nation's.

The sharpest changes in economic activity stem from the progression of the business cycle through its phases of recession and recovery. Cyclical changes have substantially different impacts in the several regions; consequently, a comparison of geographic income distribution for trend purposes is valid only when the economy of each region is at approximately the same

point in the business cycle. Accordingly, the years 1948, 1953, 1957, and 1963 have been chosen for measuring postwar regional income trends. In general, they represent high and roughly comparable points in the business cycle. They are also relatively free from distortions due to random and irregular factors such as war, reconversion, and major strikes.

Residents of this region received \$6 billion less last year than they would have if economic growth in the region had equalled the national pace. The below-average income gain of this region can be ascribed directly to a reduced volume of farm income, a development that extended throughout the Nation, generally, but which had its greatest impact in the Plains States.

Relative shifts in the distribution of income have been more moderate in the remaining six regions. In the New England, Mideast, and Great Lakes areas, the share of income in 1963 was about 6 percent lower than in 1948. In the two southern regions and the Rocky Mountain States, the income share rose by 5 to 10 percent.

## Changes in the Regional Distribution of Income

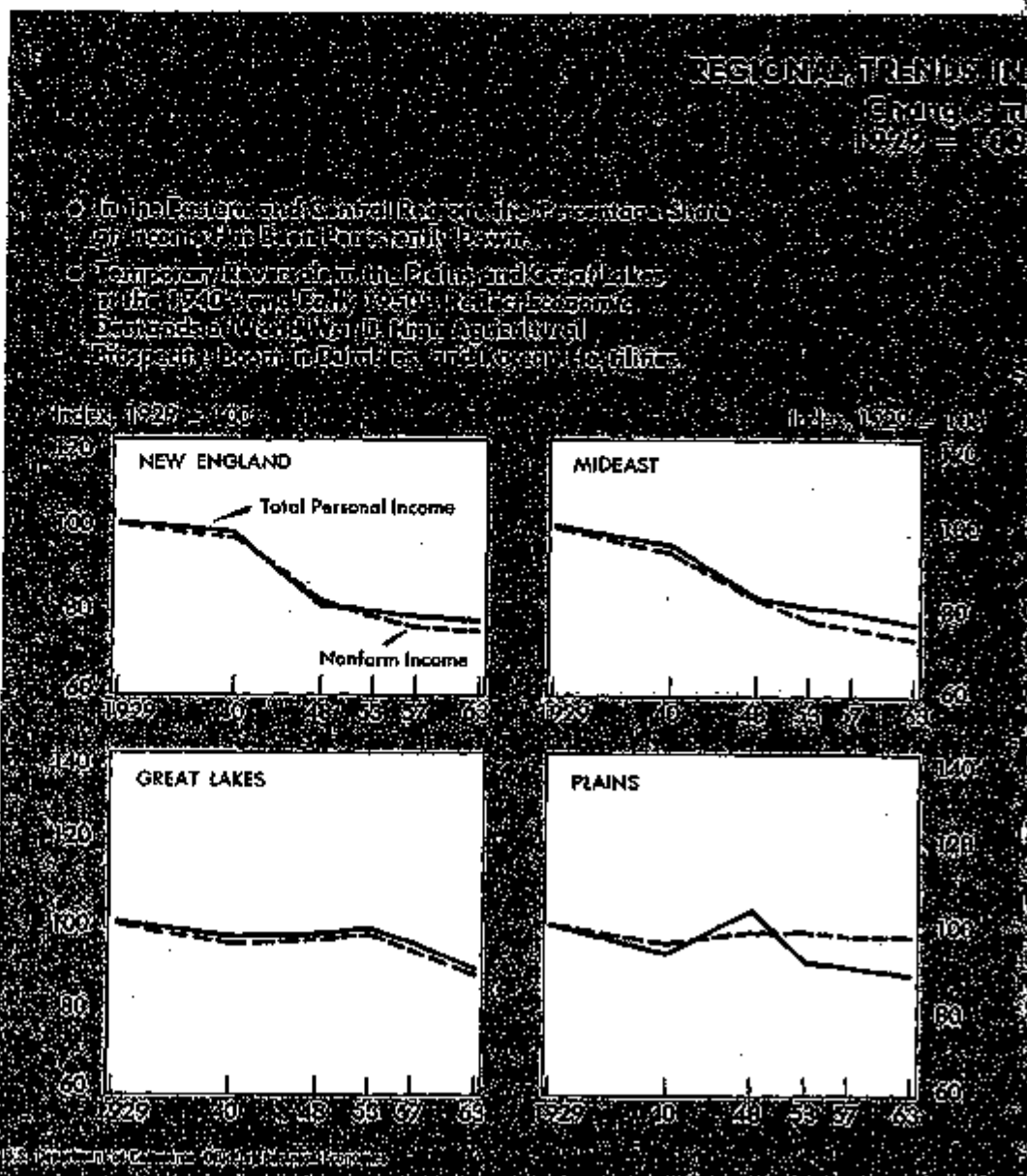
As depicted in the accompanying chart and map, there has been a significant geographic redistribution of income over the postwar years. Since 1948, the four southern and western regions have increased their share of the national total of personal income by 15 percent—an average increase of about 1 percent a year—while the four northeastern and central portions of the country have sustained the loss.

the Plains States declined 15 percent from 1948 to 1963, with each State sharing in the loss. In dollar terms,

The extent of these income shifts is shown in table 1. In relative terms, the largest change occurred in the Far West, which increased its share of the Nation's income from 11½ percent to 14½ percent, or by one-fourth, from 1948 to 1963. Income in that region expanded one and three-fourths, while for the Nation as a whole, it was up one and one-fourth. If the Far West had no more than kept pace with the national growth rate, its personal income aggregate in 1963 would have amounted to \$53 billion; instead, it totaled nearly \$66 billion. Thus, over the past 15 years, the faster economic growth of the Far West has added about \$13 billion more to its economy than might have been expected on the basis of the national average.

Above-average growth in the Far West reflects the rapid expansion of practically all industries in California and Nevada; the predominance of rapid-growth industries in the economy of California; and the correlative heavy migration into the area. The other two States of the region, Washington and Oregon, experienced moderate declines in their share of income.

In contrast, the income share of



**Continuity of trends**

Two characteristics of postwar regional trends may be noted. First—and most important because of its implication for the evaluation of future income changes—is the trend continuity that has prevailed over the entire span since 1929. Major exceptions are the acceleration of changes in shares between 1940 and 1948, and the unusual influence of agriculture in bolstering the income flow in the Plains States in 1948.

This trend continuity merits further attention because if relatively continuous trends have obtained for 35 years—a span that has included dramatic economic changes—their continuation

for some time to come would seem reasonable. This is not to say that a mechanical extrapolation of past trends can be assumed to hold for the future. It does give assurance, however, that there is sufficient stability in regional income trends to permit their projection provided the task is carried out in some industrial detail and the extensions are modified, relative to the past, as may be indicated by careful analysis.

The income shares of the two northeastern regions, New England and the Midwest, were reduced in each of the major periods charted. Moreover, except for the sharper rate of decline during the war and reconversion, the slope of the downtrend did not vary

appreciably in the years 1929–40, 1948–53, 1953–57, or 1957–63.

In the two central areas, the Great Lakes and Plains States, the parallelism between postwar trends and those of earlier periods is more obscure. From the chart on this page it appears that the shares of income received in these two regions were roughly the same in 1929 and 1948—in contrast to the declines that have occurred since the latter year. This departure from established trends is more apparent than real, however, as the income shares of both the Great Lakes and Plains States were bolstered in 1948 by special developments which lack trend significance.

In the Great Lakes, with its concentration of metal-fabricating industries, the production of munitions in the early 1940's and of peace-time durable goods after World War II pushed the region's share of total income above what its trend position would have been, simply because its industrial structure was such as to enable the region to benefit especially from the type of demand that developed. In the Plains States, the record volume of farm income in 1948 was responsible for the region's increased share of total income in that year. In both areas, these bolstering influences represent special factors. If these are discounted, the 1929–48 trends in the Great Lakes and Plains States are down, and the 1948 to 1963 movements are seen to be more in line with them.

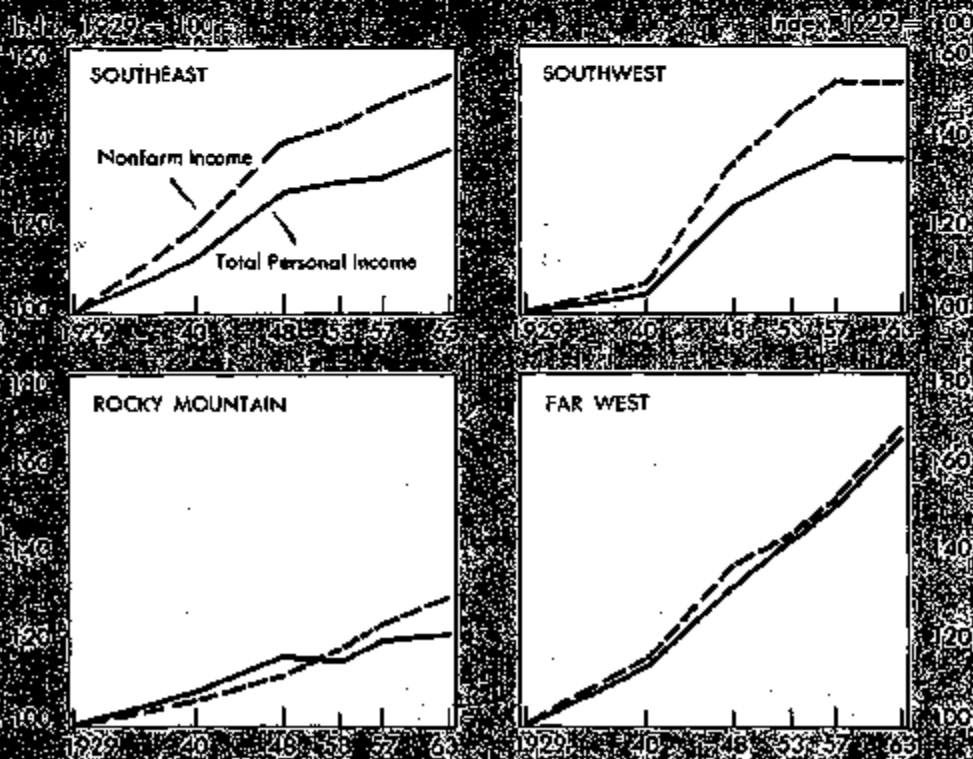
In the four southern and western regions, trend continuity is clearer, although the speed-up during the war years interrupts it to some extent.

**Influence of particular States**

A second feature of postwar regional income shifts is the dominant influence of particular States in those regions with rising income trends. Changes in three of the four regions with increased income shares in 1963 were dominated by developments in a single State of the region. The expansion in the shares of income received in the Southeast, Rocky Mountain and Far West, was due almost entirely to the economic growth of Florida, Colorado, and California. Exclusion of these three States from their respective regional totals would yield a decline in the income

**TOTAL PERSONAL INCOME****Regional Shares  
Percent**

Stronger Uptrends Prevail in the Southern and Western Regions Despite the Downward Pull of Agriculture in the Southern Areas.



share of each region between 1948 and 1963.

This situation contrasts with that in the 1929-48 period when the trend of income in most States in the four areas with above-average growth accorded with that of the region in which they were located. For example, of the 25 States in the four southern and western regions, all except one increased their

income share between 1929 and 1948. However, there is strong evidence that the lack of adherence to regional trends on the part of the individual States is lessening. Between 1957 and 1963, several of the States which had been moving counter to their regional average came back into line.

State conformity to regional change was much greater in those sections of

the country with declining income trends. All States of the Great Lakes and Plains experienced a decreased income share between 1948 and 1963, as did five of the six New England States. Only in the Mideast was there heterogeneity of movement; half of the States increased their share of income and half suffered a reduction.

Table 1.—Total Personal Income, by States and Regions, Selected Years<sup>1</sup>

|                           | Amount (millions of dollars) |        |         |         |         |         |         |         |         |  |
|---------------------------|------------------------------|--------|---------|---------|---------|---------|---------|---------|---------|--|
|                           | 1929                         | 1940   | 1948    | 1956    | 1967    | 1969    | 1981    | 1982    | 1983    |  |
| United States.....        | 35,461                       | 78,522 | 204,414 | 281,340 | 348,724 | 399,628 | 414,964 | 439,461 | 460,890 |  |
| New England.....          | 7,126                        | 6,396  | 12,949  | 18,697  | 22,793  | 25,904  | 26,867  | 28,496  | 29,854  |  |
| Maine.....                | 479                          | 444    | 1,079   | 1,398   | 1,590   | 1,850   | 1,842   | 1,945   | 1,972   |  |
| New Hampshire.....        | 322                          | 285    | 680     | 982     | 1,071   | 1,266   | 1,313   | 1,364   | 1,444   |  |
| Vermont.....              | 226                          | 184    | 430     | 542     | 598     | 734     | 750     | 782     | 816     |  |
| Massachusetts.....        | 2,822                        | 8,385  | 7,072   | 8,833   | 11,246  | 12,852  | 13,572  | 14,290  | 14,870  |  |
| Rhode Island.....         | 696                          | 834    | 1,191   | 1,545   | 1,684   | 1,875   | 1,943   | 2,033   | 2,122   |  |
| Connecticut.....          | 2,641                        | 1,566  | 3,527   | 5,117   | 6,484   | 7,257   | 7,567   | 8,033   | 8,430   |  |
| Midwest.....              | 27,465                       | 32,519 | 54,271  | 72,612  | 85,835  | 99,666  | 109,269 | 108,465 | 113,185 |  |
| New York.....             | 14,106                       | 11,712 | 20,080  | 33,295  | 47,190  | 46,837  | 48,606  | 50,865  | 53,120  |  |
| New Jersey.....           | 3,714                        | 5,432  | 7,370   | 11,431  | 14,205  | 16,153  | 17,047  | 18,032  | 18,780  |  |
| Pennsylvania.....         | 7,531                        | 6,417  | 14,876  | 20,145  | 23,585  | 26,539  | 25,945  | 26,887  | 27,823  |  |
| Delaware.....             | 240                          | 270    | 580     | 876     | 1,215   | 1,348   | 1,382   | 1,445   | 1,547   |  |
| Maryland.....             | 1,260                        | 1,209  | 3,319   | 5,028   | 6,381   | 7,458   | 7,938   | 8,582   | 9,156   |  |
| District of Columbia..... | 615                          | 807    | 1,400   | 1,387   | 2,070   | 2,396   | 2,358   | 2,534   | 2,712   |  |
| Great Lakes.....          | 26,235                       | 17,816 | 47,405  | 65,761  | 78,468  | 86,332  | 89,015  | 92,721  | 97,654  |  |
| Michigan.....             | 3,603                        | 5,610  | 9,579   | 14,516  | 16,623  | 18,173  | 18,121  | 19,307  | 20,520  |  |
| Ohio.....                 | 8,178                        | 4,608  | 12,227  | 17,316  | 20,806  | 22,722  | 23,090  | 24,145  | 25,203  |  |
| Indiana.....              | 1,973                        | 1,888  | 6,581   | 8,012   | 10,211  | 10,461  | 11,068  | 11,619  | 12,119  |  |
| Illinois.....             | 2,280                        | 5,964  | 16,472  | 18,669  | 23,941  | 28,564  | 27,471  | 28,839  | 29,065  |  |
| Wisconsin.....            | 2,001                        | 1,740  | 4,040   | 6,245   | 7,487   | 8,662   | 8,672   | 9,341   | 9,637   |  |
| Plains.....               | 7,654                        | 6,515  | 19,239  | 22,168  | 26,099  | 32,006  | 33,163  | 35,383  | 36,261  |  |
| Minnesota.....            | 1,339                        | 1,367  | 4,028   | 5,049   | 6,173   | 7,064   | 7,452   | 7,770   | 8,102   |  |
| Iowa.....                 | 1,419                        | 1,272  | 3,984   | 4,110   | 5,180   | 5,580   | 5,824   | 6,076   | 6,329   |  |
| Missouri.....             | 2,373                        | 1,882  | 9,321   | 7,000   | 8,340   | 9,524   | 9,836   | 10,382  | 10,832  |  |
| North Dakota.....         | 253                          | 234    | 702     | 771     | 869     | 1,107   | 1,003   | 1,269   | 1,287   |  |
| South Dakota.....         | 288                          | 230    | 658     | 531     | 1,021   | 1,296   | 1,292   | 1,435   | 1,424   |  |
| Nebraska.....             | 611                          | 676    | 1,851   | 2,100   | 2,638   | 3,026   | 3,078   | 3,368   | 3,346   |  |
| Kansas.....               | 998                          | 703    | 2,413   | 3,251   | 3,838   | 4,480   | 4,067   | 4,600   | 4,566   |  |
| Southeast.....            | 8,990                        | 10,387 | 21,223  | 41,183  | 52,790  | 62,248  | 65,470  | 68,298  | 74,202  |  |
| Virginia.....             | 1,064                        | 1,267  | 2,566   | 6,220   | 6,866   | 7,379   | 7,769   | 8,426   | 8,948   |  |
| West Virginia.....        | 764                          | 777    | 2,176   | 2,347   | 3,032   | 4,009   | 3,123   | 3,230   | 3,329   |  |
| Kentucky.....             | 1,020                        | 914    | 2,719   | 3,644   | 4,203   | 4,073   | 5,005   | 5,276   | 5,136   |  |
| Tennessee.....            | 982                          | 905    | 2,006   | 4,050   | 4,964   | 5,404   | 5,542   | 6,185   | 6,060   |  |
| North Carolina.....       | 1,048                        | 1,171  | 2,020   | 4,883   | 5,076   | 7,138   | 7,623   | 8,185   | 8,430   |  |
| South Carolina.....       | 470                          | 584    | 1,745   | 2,643   | 2,618   | 3,300   | 3,476   | 3,763   | 3,833   |  |
| Georgia.....              | 1,015                        | 1,069  | 3,088   | 4,480   | 4,432   | 6,868   | 6,635   | 7,213   | 7,720   |  |
| Florida.....              | 753                          | 922    | 3,053   | 6,011   | 7,203   | 8,843   | 10,220  | 11,166  | 11,639  |  |
| Alabama.....              | 586                          | 601    | 2,542   | 3,944   | 4,780   | 4,946   | 4,946   | 5,261   | 5,542   |  |
| Mississippi.....          | 570                          | 474    | 1,584   | 1,580   | 2,110   | 2,532   | 2,750   | 2,889   | 3,186   |  |
| Louisiana.....            | 860                          | 861    | 3,721   | 4,834   | 4,834   | 6,391   | 6,678   | 6,047   | 6,047   |  |
| Arkansas.....             | 584                          | 501    | 1,544   | 1,800   | 2,080   | 2,504   | 2,512   | 2,742   | 2,870   |  |
| Southwest.....            | 4,251                        | 4,066  | 12,918  | 18,670  | 22,687  | 27,180  | 28,685  | 30,433  | 31,184  |  |
| Oklahoma.....             | 1,077                        | 697    | 2,359   | 3,161   | 3,730   | 4,305   | 4,475   | 4,664   | 4,838   |  |
| Texas.....                | 2,782                        | 2,779  | 9,054   | 13,013  | 16,560  | 18,486  | 19,600  | 20,361  | 21,118  |  |
| New Mexico.....           | 171                          | 199    | 649     | 1,055   | 1,401   | 1,730   | 1,775   | 1,830   | 1,921   |  |
| Arizona.....              | 254                          | 239    | 837     | 1,441   | 2,020   | 2,689   | 2,915   | 3,164   | 3,267   |  |
| Rocky Mountain.....       | 1,616                        | 1,598  | 4,645   | 6,103   | 7,830   | 9,072   | 9,589   | 10,245  | 10,651  |  |
| Montana.....              | 312                          | 318    | 865     | 1,090   | 1,290   | 1,362   | 1,344   | 1,585   | 1,583   |  |
| Idaho.....                | 225                          | 242    | 708     | 853     | 1,072   | 1,184   | 1,240   | 1,365   | 1,379   |  |
| Wyoming.....              | 151                          | 152    | 413     | 547     | 659     | 768     | 768     | 790     | 814     |  |
| Colorado.....             | 642                          | 617    | 1,760   | 2,492   | 3,367   | 4,038   | 4,514   | 4,820   | 4,878   |  |
| Utah.....                 | 284                          | 266    | 706     | 1,143   | 1,461   | 1,721   | 1,842   | 2,015   | 2,063   |  |
| Far West.....             | 7,384                        | 7,767  | 23,283  | 34,321  | 45,466  | 64,537  | 67,727  | 68,186  | 68,331  |  |
| Washington.....           | 1,106                        | 1,193  | 3,008   | 5,683   | 5,832   | 6,697   | 6,930   | 7,471   | 7,039   |  |
| Oregon.....               | 647                          | 677    | 2,261   | 2,934   | 3,400   | 3,969   | 4,090   | 4,340   | 4,592   |  |
| Nevada.....               | 79                           | 89     | 273     | 402     | 446     | 515     | 511     | 1,006   | 1,261   |  |
| California.....           | 5,602                        | 5,839  | 17,610  | 29,642  | 35,582  | 43,123  | 46,776  | 48,187  | 52,419  |  |
| Alaska.....               | n.a.                         | n.a.   | n.a.    | 506     | 537     | 632     | 629     | 656     | 690     |  |
| Hawaii.....               | n.a.                         | 245    | 725     | 839     | 1,008   | 1,421   | 1,320   | 1,503   | 1,076   |  |

See footnotes at end of table.

## Industrial Factors Underlying Regional Trends

The remainder of this article examines the factors underlying postwar regional income trends. They will be discussed from three standpoints: Industrial changes in the income aggregate; the influence of population shifts on income change; and trends in per

capita income. Analysis at this level cannot do much more than point out relative strengths and weaknesses of particular areas, and measure their importance. A determination of underlying causes and effects—why, for example, a given industry in one

region has grown faster than its counterpart in other regions—is a problem beyond the scope of this review.

For analytical purposes total income may be divided into two categories: That received by persons for their participation in current production (hereafter termed participation income), and that received from investments and in the form of transfer payments.

Table 1.—Total Personal Income, by States and Regions, Selected Years<sup>1</sup>—Continued

|                      | Percent of United States |        |        |        |        |        |        |        |        | Percent change |         |         |         |         |         |         |
|----------------------|--------------------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------|---------|---------|---------|---------|---------|---------|
|                      | 1929                     | 1940   | 1948   | 1953   | 1957   | 1960   | 1961   | 1962   | 1963   | 1929-53        | 1929-45 | 1948-53 | 1948-53 | 1953-57 | 1957-63 | 1962-63 |
| United States        | 100.00                   | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 338            | 142     | 122     | 37      | 23      | 23      | 5       |
| New England          | 8.33                     | 8.15   | 6.72   | 6.80   | 6.54   | 6.59   | 6.59   | 6.48   | 6.44   | 315            | 96      | 113     | 34      | 22      | 34      | 4       |
| Maine                | .50                      | .57    | .52    | .45    | .45    | .46    | .44    | .44    | .43    | 312            | 126     | 88      | 20      | 22      | 24      | 8       |
| New Hampshire        | .38                      | .39    | .32    | .30    | .31    | .32    | .32    | .32    | .31    | 348            | 106     | 119     | 31      | 24      | 35      | 4       |
| Vermont              | .28                      | .23    | .20    | .19    | .18    | .18    | .18    | .18    | .18    | 263            | 87      | 94      | 29      | 16      | 30      | 4       |
| Massachusetts        | 4.51                     | 4.23   | 3.41   | 2.80   | 2.25   | 2.25   | 2.27   | 2.25   | 2.22   | 285            | 88      | 110     | 22      | 22      | 31      | 4       |
| Rhode Island         | .89                      | .68    | .57    | .54    | .48    | .47    | .47    | .47    | .45    | 358            | 100     | 78      | 30      | 10      | 25      | 3       |
| Connecticut          | 1.97                     | 1.99   | 1.70   | 1.81   | 1.85   | 1.82   | 1.82   | 1.82   | 1.83   | 414            | 115     | 139     | 45      | 20      | 80      | 5       |
| Midwest              | 22.06                    | 20.50  | 20.17  | 20.55  | 20.40  | 20.27  | 20.29  | 20.06  | 20.08  | 332            | 98      | 109     | 24      | 22      | 38      | 4       |
| New York             | 16.47                    | 14.92  | 12.56  | 11.75  | 11.91  | 11.73  | 11.72  | 11.59  | 11.54  | 277            | 85      | 104     | 28      | 24      | 29      | 4       |
| New Jersey           | 4.33                     | 4.37   | 3.80   | 4.03   | 4.07   | 4.06   | 4.11   | 4.10   | 4.07   | 405            | 112     | 138     | 45      | 24      | 32      | 4       |
| Pennsylvania         | 8.79                     | 8.17   | 7.17   | 7.11   | 6.75   | 6.20   | 6.26   | 6.13   | 6.00   | 271            | 96      | 88      | 35      | 17      | 19      | 4       |
| Delaware             | .28                      | .34    | .27    | .31    | .35    | .33    | .33    | .33    | .34    | 646            | 129     | 181     | 59      | 30      | 27      | 4       |
| Maryland             | 1.47                     | 1.67   | 1.60   | 1.78   | 1.83   | 1.87   | 1.91   | 1.95   | 1.98   | 625            | 183     | 170     | 62      | 27      | 43      | 7       |
| District of Columbia | .73                      | 1.03   | .77    | .67    | .59    | .58    | .57    | .57    | .59    | 342            | 160     | 70      | 15      | 10      | 31      | 7       |
| Great Lakes          | 23.61                    | 22.69  | 22.90  | 23.21  | 22.68  | 21.60  | 21.22  | 21.86  | 21.07  | 380            | 121     | 184     | 38      | 19      | 24      | 5       |
| Michigan             | 4.44                     | 4.60   | 4.92   | 5.19   | 4.85   | 4.55   | 4.37   | 4.39   | 4.46   | 440            | 152     | 114     | 52      | 17      | 21      | 6       |
| Ohio                 | 8.04                     | 7.86   | 7.69   | 8.11   | 8.89   | 8.69   | 8.28   | 8.49   | 8.46   | 368            | 138     | 107     | 42      | 21      | 21      | 5       |
| Indiana              | 2.30                     | 2.42   | 2.68   | 2.83   | 2.84   | 2.88   | 2.82   | 2.82   | 2.82   | 489            | 183     | 108     | 44      | 15      | 28      | 5       |
| Illinois             | 8.50                     | 7.59   | 7.49   | 6.93   | 6.87   | 6.65   | 6.63   | 6.56   | 6.51   | 312            | 113     | 94      | 27      | 22      | 25      | 4       |
| Wisconsin            | 2.23                     | 2.23   | 2.24   | 2.21   | 2.15   | 2.15   | 2.14   | 2.12   | 2.10   | 353            | 182     | 108     | 34      | 20      | 29      | 3       |
| Plains               | 8.57                     | 8.38   | 8.26   | 8.17   | 8.05   | 8.04   | 7.85   | 8.05   | 7.96   | 379            | 154     | 89      | 29      | 21      | 29      | 3       |
| Minnesota            | 1.80                     | 1.87   | 1.94   | 1.78   | 1.77   | 1.78   | 1.80   | 1.77   | 1.77   | 430            | 162     | 102     | 25      | 22      | 32      | 5       |
| Iowa                 | 1.64                     | 1.65   | 1.90   | 1.43   | 1.48   | 1.40   | 1.40   | 1.35   | 1.37   | 348            | 177     | 61      | 4       | 34      | 24      | 4       |
| Missouri             | 2.84                     | 2.32   | 2.57   | 2.47   | 2.38   | 2.36   | 2.37   | 2.36   | 2.36   | 377            | 194     | 104     | 32      | 19      | 21      | 5       |
| North Dakota         | .30                      | .28    | .39    | .27    | .27    | .28    | .24    | .33    | .23    | 409            | 217     | 60      | —4      | 22      | 37      | —12     |
| South Dakota         | .34                      | .29    | .43    | .31    | .31    | .32    | .31    | .34    | .31    | 264            | 268     | 60      | —1      | 24      | 31      | —4      |
| Nebraska             | .65                      | .71    | .89    | .74    | .76    | .76    | .74    | .77    | .73    | 313            | 128     | 81      | 14      | 23      | 37      | —1      |
| Kansas               | 1.15                     | .97    | 1.16   | 1.15   | 1.10   | 1.13   | 1.12   | 1.10   | 1.08   | 307            | 142     | 100     | 36      | 18      | 29      | 2       |
| Southeast            | 11.67                    | 11.23  | 10.96  | 10.25  | 10.43  | 10.62  | 10.75  | 10.93  | 10.11  | 644            | 212     | 138     | 38      | 25      | 38      | 6       |
| Virginia             | 1.23                     | 1.82   | 1.73   | 1.84   | 1.83   | 1.85   | 1.97   | 1.92   | 1.94   | 749            | 238     | 151     | 46      | 22      | 40      | 6       |
| West Virginia        | .93                      | .99    | 1.05   | 1.20   | .88    | .78    | .75    | .73    | .72    | 310            | 174     | 58      | 17      | 31      | 3       | 5       |
| Kentucky             | 1.19                     | 1.15   | 1.81   | 1.29   | 1.20   | 1.17   | 1.21   | 1.20   | 1.20   | 443            | 167     | 104     | 34      | 13      | 32      | 4       |
| Tennessee            | 1.15                     | 1.27   | 1.43   | 1.43   | 1.30   | 1.38   | 1.41   | 1.41   | 1.42   | 558            | 260     | 113     | 35      | 20      | 25      | 6       |
| North Carolina       | 1.22                     | 1.49   | 1.73   | 1.73   | 1.71   | 1.79   | 1.84   | 1.85   | 1.87   | 726            | 216     | 136     | 35      | 23      | 44      | 5       |
| South Carolina       | .85                      | .74    | .93    | .80    | .81    | .83    | .84    | .85    | .85    | 737            | 273     | 124     | 45      | 11      | 40      | 5       |
| Georgia              | 1.18                     | 1.35   | 1.49   | 1.28   | 1.34   | 1.60   | 1.59   | 1.54   | 1.68   | 661            | 204     | 150     | 44      | 22      | 62      | 7       |
| Florida              | .88                      | 1.25   | 1.47   | 1.78   | 2.23   | 2.47   | 2.49   | 2.44   | 2.59   | 1,485          | 385     | 291     | 65      | 54      | 54      | 7       |
| Alabama              | 1.00                     | 1.02   | 1.23   | 1.18   | 1.21   | 1.20   | 1.19   | 1.20   | 1.20   | 547            | 197     | 113     | 22      | 28      | 32      | 5       |
| Mississippi          | .67                      | .60    | .75    | .67    | .61    | .64    | .60    | .66    | .69    | 454            | 174     | 102     | 21      | 12      | 49      | 9       |
| Louisiana            | 1.01                     | 1.10   | 1.25   | 1.31   | 1.40   | 1.31   | 1.30   | 1.29   | 1.31   | 595            | 200     | 133     | 43      | 31      | 24      | 8       |
| Arkansas             | .66                      | .64    | .74    | .64    | .69    | .60    | .63    | .63    | .64    | 427            | 174     | 92      | 17      | 14      | 44      | 5       |
| Southwest            | 4.37                     | 4.21   | 5.23   | 6.60   | 6.60   | 6.81   | 6.91   | 6.83   | 6.78   | 623            | 204     | 141     | 45      | 27      | 32      | 4       |
| Oklahoma             | 1.26                     | 1.30   | 1.14   | 1.13   | 1.07   | 1.08   | 1.05   | 1.05   | 1.05   | 351            | 119     | 106     | 34      | 18      | 30      | 4       |
| Texas                | 2.51                     | 2.54   | 4.37   | 4.60   | 4.75   | 4.64   | 4.70   | 4.63   | 4.69   | 867            | 229     | 133     | 44      | 27      | 25      | 4       |
| New Mexico           | .20                      | .25    | .31    | .37    | .40    | .43    | .43    | .42    | .42    | 1,023          | 291     | 166     | 63      | 35      | 37      | 3       |
| Arizona              | .30                      | .32    | .41    | .61    | .66    | .67    | .70    | .72    | .72    | 1,196          | 237     | 295     | 68      | 39      | 64      | 4       |
| Rocky Mountain       | 1.56                     | 2.48   | 2.19   | 2.17   | 2.26   | 2.27   | 2.29   | 2.34   | 2.29   | 554            | 182     | 132     | 35      | 27      | 35      | 3       |
| Montana              | .30                      | .40    | .49    | .39    | .37    | .34    | .32    | .35    | .34    | 407            | 177     | 83      | 26      | 17      | 24      | 1       |
| Idaho                | .20                      | .31    | .34    | .31    | .31    | .30    | .30    | .31    | .30    | 513            | 214     | 95      | 25      | 21      | 29      | 2       |
| Wyoming              | .19                      | .10    | .20    | .19    | .19    | .19    | .18    | .18    | .18    | 442            | 177     | 96      | 31      | 19      | 26      | 3       |
| Colorado             | .75                      | .79    | .88    | .88    | .87    | 1.01   | 1.04   | 1.02   | 1.02   | 628            | 174     | 166     | 42      | 25      | 39      | 5       |
| Utah                 | .53                      | .94    | .88    | .40    | .42    | .43    | .44    | .45    | .45    | 637            | 180     | 163     | 44      | 28      | 43      | 4       |
| Far West             | 8.63                     | 9.59   | 11.45  | 12.33  | 13.43  | 13.65  | 13.82  | 14.12  | 14.32  | 791            | 221     | 177     | 47      | 38      | 45      | 4       |
| Washington           | 1.36                     | 1.47   | 1.74   | 1.73   | 1.67   | 1.66   | 1.67   | 1.70   | 1.66   | 655            | 210     | 112     | 35      | 19      | 31      | 2       |
| Oregon               | .75                      | .89    | 1.09   | 1.04   | .87    | .90    | .89    | .89    | 1.00   | 910            | 249     | 103     | 30      | 19      | 35      | 6       |
| Nevada               | .09                      | .13    | .13    | .13    | .18    | .20    | .23    | .28    | .27    | 1,471          | 245     | 355     | 69      | 40      | 82      | 18      |
| California           | 6.42                     | 7.45   | 8.49   | 9.41   | 10.28  | 10.81  | 11.04  | 11.18  | 11.39  | 859            | 220     | 166     | 61      | 34      | 47      | 7       |
| Alaska               |                          |        |        |        | .16    | .16    | .15    | .15    | .15    | n.a.           | n.a.    | n.a.    | n.a.    | n.a.    | 36      | 7       |
| Hawaii               |                          | .31    | .35    | .81    | .31    | .36    | .37    | .36    | .36    | n.a.           | n.a.    | n.a.    | n.a.    | n.a.    | 63      | 8       |

1. Totals include Alaska and Hawaii for 1960 forward.  
n.a.—Not available.

## Participation Income

The first category, participation income, accounts for about 80 percent of total income on the average. It consists of wages and salaries, supplementary labor income, and earnings of self-employed persons, and it can be measured on an industry basis. Since State and regional changes in participation income closely paralleled the changes in total income discussed previously, attention is turned toward an analysis of factors making for geographic variations in changes in participation income. The initial step in the process is to dissect the total growth increment of this income aggregate into its component parts.<sup>1</sup>

### Components of growth

The first component is due to the overall growth of the national economy. The assumption is made that with no differences in regional characteristics each area would grow at the same rate, and so maintain its share of the Nation's total. This national growth element is thus computed by applying to participation income in each State in the initial year (1948) the national percentage increase in total participation income between the initial year and the terminal year (1962). These figures are shown in column A, table 3.<sup>2</sup>

The second element of an area's expansion, and the first of the two factors which make for a difference in the growth rate of an area and the Nation, stems from differences in income structure or "industry-mix" of the area and the Nation. To the extent that a large proportion of an area's economy consists of slow-growing industries, its income will expand at a below-average rate, other things being equal. Conversely, an area that specializes in industries that are generally growing rapidly will increase its share

of the Nation's income total, other things being equal.

This "industry-mix", or compositional effect, is measured by applying to each industry in an area in the base year the difference between the national growth rate in that industry and the national all-industry growth rate. Where the former is larger, the industry is termed a rapid-growth industry, and it gives a special boost to area growth, with the size of the increment determined by the amount of the industry located in the area. Where the industry growth rate is less than the all-industry figure, it is termed a slow-growth industry and its effect on differential income growth is negative. This effect is a relative one, of course. In most instances, slow-growth industries added to total income in an area in absolute terms. The industry-mix component is shown for all industries combined in column B, table 3.

The third, and final element of an area's growth, and the second which makes for a differential change comes from regional shifts within individual industries. An industry that is growing faster (slower) in an area than its counterparts in the Nation as a whole will add to (subtract from) the area's overall growth. This "regional industry-share" element is calculated by applying to each local industry in the base year the difference between the percentage change in that industry in the area and the percentage change in the same industry nationally. The value of the total regional-share effect is shown in column C, table 3.

The sum of the three components—see column D, table 3—equals the total change in income from participation in current production. The sum of the industry-mix and regional-share effects for all industries combined represents the net relative change in income in the area. It is the dollar measure by which the rate of area income change exceeds or falls short of the national growth rate. This measure is tabulated in column E of table 3.

Two points should be kept in mind with regard to this analytical technique. While it is difficult to interpret the two factors accounting for differences in regional growth in terms of

precise economic categories, the regional-share factor can, in many cases, be taken to reflect changes in the relative competitive position of the various regions. Secondly, the allocation of a relative change in income between that part due to regional-share and that due to industry-mix is dependent to a degree on the extent of industrial disaggregation used.

### Regional-share and industry-mix effects

Regional-share effects played the dominant role in determining net changes in the geographic distribution of participation income between 1948 and 1962. In every region except the Plains, the income change due to regional-share was much larger than that due to industry-mix effect. In the Plains region the opposite situation obtained, as the decline in farm income had its maximum impact there.

The pervasiveness of the regional-share effect shows clearly in the accompanying tabulation. Except in the Plains, most industries within a region increased their share of the industry total or most sustained a relative loss. Only in the Plains did the gains and losses approach a balance.

Number of industries in each region with relative gains or relative losses

| Region         | Gains | Losses |
|----------------|-------|--------|
| New England    | 9     | 24     |
| Midwest        | 4     | 29     |
| Great Lakes    | 5     | 28     |
| Plains         | 19    | 14     |
| Southeast      | 39    | 4      |
| Southwest      | 36    | 5      |
| Rocky Mountain | 29    | 5      |
| Far West       | 28    | 6      |

The effect of industry-mix on relative income change generally ran counter to the regional-share experience. A favorable industry-mix, reflecting mainly the comparative absence of agriculture, reduced the total relative loss in income substantially in the two northeastern regions and in the Great Lakes.

A contrary situation prevailed in the two southern regions and in the Rocky Mountain States. Each of these regions was characterized by a very adverse industry-mix, again a reflection of agriculture, and in each area this tended to reduce substantially the above-average growth in total income.

In the agricultural Plains States, both factors accounting for differential income growth were adverse, with industry-mix by far the larger influence.

<sup>1</sup> The technique used here is that developed principally by Edgar S. Dunn and set forth in "A Statistical and Analytical Technique for Regional Analysis", *Papers and Proceedings, Regional Science Association*, Vol. 8, 1960, pp. 98-112. Further development and refinement of the technique is now underway in the Regional Economics Division of the Office of Business Economics under the direction of Lowell D. Ashby and John M. Mattila.

<sup>2</sup> The year 1962 is used as the terminal year because the necessary industrial detail for 1963 is not available. To judge from summary data, substitution of 1963 for 1962 would cause no significant differences in conclusions reached.

The Far West was the only region to benefit both from the mix and share factors. More than one-third of all regional-share gains in the Nation accrued to the Far West while one-fifth of those due to industry-mix were to the benefit of this Region.

#### Summary of regional shifts

Following is a brief review of some of the main factors underlying these

regional-share and industry-mix effects in each region or group of regions. For those interested in a more detailed examination, the effects of both factors are shown in tables 4 and 5 for 34 industries.<sup>3</sup> These tables thus provide

<sup>3</sup> For some of the 34 industries, payrolls instead of total participation income are used. In those instances, other labor income and proprietors' incomes are grouped in the "other" component.

a ready tool for identifying in more detail the elements of economic growth.

The declines in the share of participation income received in the New England, the Mideast, and Great Lakes regions resulted mainly from the fact that more than four-fifths of their industries suffered reductions in their shares of the corresponding industry totals. Although declines were the

Table 2.—Per Capita Personal Income, by States and Regions, Selected Years<sup>1</sup>

|                           | Amount (dollars) |       |       |       |       |       |       |       |       |      | Percent of United States |      |      |      |      |      |      |      |      |      | Percent change |         |         |         |         |         |    |
|---------------------------|------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|--------------------------|------|------|------|------|------|------|------|------|------|----------------|---------|---------|---------|---------|---------|----|
|                           | 1929             | 1930  | 1931  | 1932  | 1933  | 1934  | 1935  | 1936  | 1937  | 1938 | 1929                     | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 | 1938 | 1929-32        | 1930-31 | 1931-32 | 1932-33 | 1933-34 | 1934-35 |    |
| United States.....        | 763              | 696   | 1,428 | 1,798 | 2,048 | 2,217 | 2,267 | 2,356 | 2,443 | 160  | 100                      | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | 247  | 102            | 72      | 26      | 15      | 19      | 3       |    |
| New England.....          | 818              | 767   | 1,511 | 1,958 | 2,298 | 2,466 | 2,563 | 2,680 | 2,784 | 126  | 127                      | 106  | 110  | 113  | 111  | 113  | 113  | 113  | 113  | 214  | 72             | 82      | 36      | 17      | 26      | 3       |    |
| Maine.....                | 901              | 823   | 1,229 | 1,431 | 1,680 | 1,871 | 1,966 | 2,006 | 2,098 | 85   | 88                       | 87   | 80   | 82   | 84   | 83   | 82   | 84   | 84   | 234  | 104            | 63      | 10      | 16      | 19      | 3       |    |
| New Hampshire.....        | 890              | 819   | 1,263 | 1,470 | 1,719 | 1,910 | 2,005 | 2,045 | 2,137 | 86   | 89                       | 88   | 81   | 84   | 85   | 85   | 84   | 86   | 86   | 234  | 104            | 63      | 10      | 16      | 19      | 3       |    |
| Vermont.....              | 827              | 767   | 1,170 | 1,374 | 1,623 | 1,814 | 1,909 | 1,949 | 2,041 | 80   | 83                       | 82   | 80   | 81   | 83   | 82   | 81   | 83   | 83   | 234  | 104            | 63      | 10      | 16      | 19      | 3       |    |
| Massachusetts.....        | 913              | 854   | 1,313 | 1,517 | 1,766 | 1,957 | 2,052 | 2,092 | 2,184 | 100  | 103                      | 102  | 109  | 114  | 117  | 115  | 117  | 117  | 117  | 212  | 102            | 68      | 20      | 19      | 22      | 3       |    |
| Rhode Island.....         | 871              | 748   | 1,211 | 1,415 | 1,664 | 1,855 | 1,950 | 1,990 | 2,082 | 124  | 124                      | 107  | 106  | 114  | 117  | 115  | 117  | 117  | 117  | 212  | 102            | 68      | 20      | 19      | 22      | 3       |    |
| Connecticut.....          | 1,029            | 917   | 1,391 | 1,595 | 1,844 | 2,035 | 2,130 | 2,170 | 2,262 | 146  | 144                      | 128  | 124  | 127  | 129  | 130  | 129  | 129  | 129  | 237  | 70             | 81      | 37      | 17      | 12      | 3       |    |
| Mideast.....              | 913              | 799   | 1,448 | 1,898 | 2,248 | 2,598 | 2,748 | 2,898 | 3,048 | 138  | 133                      | 116  | 117  | 116  | 116  | 116  | 116  | 116  | 116  | 237  | 89             | 71      | 26      | 15      | 17      | 3       |    |
| New York.....             | 1,159            | 870   | 1,796 | 2,147 | 2,498 | 2,749 | 2,899 | 3,049 | 3,199 | 165  | 146                      | 127  | 120  | 124  | 125  | 125  | 125  | 125  | 125  | 237  | 189            | 66      | 67      | 19      | 28      | 18      | 3  |
| New Jersey.....           | 951              | 822   | 1,630 | 2,016 | 2,353 | 2,690 | 2,837 | 2,984 | 3,131 | 132  | 116                      | 106  | 104  | 104  | 104  | 104  | 104  | 104  | 104  | 212  | 119            | 77      | 26      | 34      | 14      | 18      | 3  |
| Pennsylvania.....         | 975              | 848   | 1,645 | 2,031 | 2,368 | 2,705 | 2,852 | 2,999 | 3,146 | 110  | 100                      | 102  | 105  | 105  | 105  | 105  | 105  | 105  | 105  | 215  | 87             | 69      | 32      | 33      | 13      | 14      | 3  |
| Delaware.....             | 1,017            | 1,004 | 1,743 | 2,129 | 2,466 | 2,803 | 2,950 | 3,097 | 3,244 | 145  | 169                      | 124  | 140  | 141  | 135  | 133  | 133  | 133  | 133  | 220  | 75             | 84      | 42      | 35      | 12      | 13      | 3  |
| Maryland.....             | 977              | 871   | 1,657 | 2,043 | 2,380 | 2,717 | 2,864 | 2,991 | 3,118 | 111  | 120                      | 103  | 110  | 105  | 108  | 111  | 112  | 114  | 114  | 258  | 89             | 91      | 44      | 13      | 25      | 27      | 5  |
| District of Columbia..... | 1,273            | 1,170 | 1,965 | 2,351 | 2,688 | 3,025 | 3,172 | 3,319 | 3,466 | 161  | 197                      | 134  | 127  | 130  | 135  | 135  | 135  | 135  | 135  | 367  | 60             | 76      | 19      | 17      | 27      | 25      | 5  |
| Great Lakes.....          | 893              | 647   | 1,592 | 2,063 | 2,368 | 2,674 | 2,980 | 3,286 | 3,592 | 114  | 112                      | 112  | 115  | 110  | 107  | 106  | 106  | 107  | 107  | 225  | 86             | 64      | 29      | 40      | 15      | 14      | 4  |
| Michigan.....             | 788              | 678   | 1,542 | 2,013 | 2,318 | 2,623 | 2,928 | 3,233 | 3,538 | 113  | 114                      | 109  | 119  | 104  | 100  | 100  | 100  | 100  | 100  | 219  | 84             | 64      | 28      | 5       | 10      | 10      | 3  |
| Ohio.....                 | 781              | 665   | 1,482 | 2,013 | 2,318 | 2,623 | 2,928 | 3,233 | 3,538 | 111  | 112                      | 109  | 113  | 103  | 103  | 103  | 103  | 103  | 103  | 218  | 80             | 61      | 30      | 12      | 10      | 10      | 3  |
| Indiana.....              | 612              | 544   | 1,440 | 1,913 | 2,218 | 2,523 | 2,828 | 3,133 | 3,438 | 87   | 83                       | 101  | 107  | 89   | 89   | 89   | 89   | 89   | 89   | 185  | 72             | 33      | 6       | 22      | 14      | 16      | 3  |
| Illinois.....             | 907              | 734   | 1,440 | 2,187 | 2,508 | 2,829 | 3,150 | 3,471 | 3,792 | 136  | 127                      | 127  | 123  | 122  | 119  | 120  | 121  | 121  | 121  | 208  | 89             | 65      | 31      | 14      | 16      | 16      | 3  |
| Wisconsin.....            | 682              | 554   | 1,403 | 1,784 | 2,089 | 2,394 | 2,700 | 3,005 | 3,310 | 97   | 98                       | 96   | 108  | 98   | 98   | 98   | 98   | 98   | 98   | 219  | 106            | 70      | 27      | 10      | 21      | 2       | 2  |
| Plains.....               | 573              | 483   | 1,434 | 1,634 | 1,834 | 2,034 | 2,234 | 2,434 | 2,634 | 81   | 81                       | 100  | 98   | 81   | 84   | 84   | 84   | 84   | 84   | 306  | 147            | 64      | 14      | 15      | 24      | 2       | 2  |
| Minnesota.....            | 588              | 528   | 1,404 | 1,604 | 1,804 | 2,004 | 2,204 | 2,404 | 2,604 | 82   | 88                       | 99   | 92   | 91   | 94   | 94   | 94   | 94   | 94   | 280  | 125            | 66      | 17      | 12      | 25      | 4       | 4  |
| Iowa.....                 | 577              | 501   | 1,347 | 1,547 | 1,747 | 1,947 | 2,147 | 2,347 | 2,547 | 80   | 84                       | 99   | 97   | 91   | 91   | 92   | 93   | 93   | 93   | 264  | 106            | 47      | 1       | 20      | 22      | 22      | 4  |
| Missouri.....             | 628              | 524   | 1,313 | 1,513 | 1,713 | 1,913 | 2,113 | 2,313 | 2,513 | 88   | 88                       | 97   | 96   | 86   | 86   | 86   | 86   | 86   | 86   | 280  | 120            | 81      | 24      | 14      | 22      | 22      | 4  |
| North Dakota.....         | 375              | 350   | 1,384 | 1,584 | 1,784 | 1,984 | 2,184 | 2,384 | 2,584 | 53   | 59                       | 97   | 70   | 73   | 70   | 70   | 70   | 70   | 70   | 441  | 280            | 47      | 10      | 20      | 26      | 12      | 12 |
| South Dakota.....         | 417              | 350   | 1,451 | 1,651 | 1,851 | 2,051 | 2,251 | 2,451 | 2,651 | 59   | 60                       | 102  | 75   | 76   | 76   | 76   | 76   | 76   | 76   | 445  | 285            | 33      | 10      | 19      | 21      | 21      | 12 |
| Nebraska.....             | 498              | 489   | 1,403 | 1,603 | 1,803 | 2,003 | 2,203 | 2,403 | 2,603 | 64   | 74                       | 103  | 98   | 92   | 96   | 96   | 96   | 96   | 96   | 445  | 285            | 33      | 10      | 19      | 21      | 21      | 12 |
| Kansas.....               | 343              | 424   | 1,278 | 1,478 | 1,678 | 1,878 | 2,078 | 2,278 | 2,478 | 76   | 72                       | 90   | 92   | 86   | 86   | 86   | 86   | 86   | 86   | 317  | 139            | 70      | 28      | 11      | 23      | 2       | 2  |
| Southeast.....            | 348              | 243   | 908   | 1,227 | 1,446 | 1,665 | 1,884 | 2,103 | 2,322 | 52   | 53                       | 58   | 63   | 71   | 72   | 74   | 74   | 74   | 74   | 364  | 163            | 48      | 38      | 17      | 24      | 5       | 5  |
| Virginia.....             | 455              | 366   | 1,112 | 1,404 | 1,696 | 1,988 | 2,280 | 2,572 | 2,864 | 62   | 78                       | 78   | 83   | 89   | 89   | 89   | 89   | 89   | 89   | 375  | 166            | 36      | 20      | 13      | 24      | 4       | 4  |
| West Virginia.....        | 422              | 307   | 1,187 | 1,387 | 1,587 | 1,787 | 1,987 | 2,187 | 2,387 | 68   | 68                       | 81   | 73   | 80   | 80   | 80   | 80   | 80   | 80   | 364  | 166            | 47      | 1       | 20      | 22      | 14      | 4  |
| Kentucky.....             | 391              | 320   | 965   | 1,257 | 1,449 | 1,641 | 1,833 | 2,025 | 2,217 | 56   | 54                       | 58   | 78   | 70   | 69   | 72   | 72   | 72   | 72   | 383  | 147            | 35      | 16      | 14      | 26      | 16      | 16 |
| Tennessee.....            | 377              | 320   | 935   | 1,218 | 1,401 | 1,584 | 1,767 | 1,950 | 2,133 | 54   | 57                       | 58   | 63   | 69   | 69   | 72   | 72   | 72   | 72   | 371  | 148            | 30      | 16      | 16      | 27      | 16      | 16 |
| North Carolina.....       | 324              | 298   | 943   | 1,173 | 1,345 | 1,517 | 1,689 | 1,861 | 2,033 | 48   | 55                       | 59   | 66   | 66   | 70   | 72   | 72   | 72   | 72   | 345  | 145            | 28      | 16      | 16      | 27      | 16      | 16 |
| South Carolina.....       | 270              | 267   | 879   | 1,141 | 1,313 | 1,485 | 1,657 | 1,829 | 2,001 | 48   | 59                       | 62   | 64   | 66   | 68   | 68   | 68   | 68   | 68   | 345  | 145            | 28      | 16      | 16      | 27      | 16      | 16 |
| Georgia.....              | 340              | 240   | 948   | 1,239 | 1,411 | 1,583 | 1,755 | 1,927 | 2,099 | 50   | 57                       | 57   | 68   | 68   | 72   | 72   | 72   | 72   | 72   | 345  | 145            | 28      | 16      | 16      | 27      | 16      | 16 |
| Florida.....              | 321              | 313   | 1,184 | 1,356 | 1,528 | 1,700 | 1,872 | 2,044 | 2,216 | 74   | 86                       | 89   | 89   | 90   | 90   | 90   | 90   | 90   | 90   | 364  | 163            | 47      | 1       | 20      | 22      | 14      | 4  |
| Alabama.....              | 324              | 282   | 950   | 1,084 | 1,218 | 1,352 | 1,486 | 1,620 | 1,754 | 46   | 47                       | 60   | 61   | 66   | 66   | 66   | 66   | 66   | 66   | 345  | 145            | 28      | 16      | 16      | 27      | 16      | 16 |
| Mississippi.....          | 285              | 218   | 728   | 884   | 1,040 | 1,196 | 1,352 | 1,508 | 1,664 | 41   | 37                       | 65   | 60   | 48   | 53   | 53   | 53   | 53   | 53   | 345  | 145            | 28      | 16      | 16      | 27      | 16      | 16 |
| Louisiana.....            | 416              | 383   | 1,002 | 1,202 | 1,402 | 1,602 | 1,802 | 2,002 | 2,202 | 60   | 61                       | 71   | 72   | 78   | 72   | 72   | 72   | 72   | 72   | 345  | 145            | 28      | 16      | 16      | 27      | 16      | 16 |
| Arkansas.....             | 365              | 269   | 846   | 985   | 1,124 | 1,263 | 1,402 | 1,541 | 1,680 | 43   | 49                       | 50   | 56   | 56   | 60   | 64   | 64   | 64   | 64   | 345  | 145            | 28      | 16      | 16      | 27      | 16      | 16 |
| Southwest.....            | 474              | 418   | 1,173 | 1,529 | 1,772 | 1,908 | 1,947 | 1,986 | 2,025 | 67   | 70                       | 83   | 86   | 87   | 86   | 86   | 86   | 86   | 86   | 238  | 147            | 79      | 39      | 16      | 14      | 2       | 2  |
| Oklahoma.....             | 454              | 373   | 1,120 | 1,476 | 1,832 | 2,188 | 2,544 | 2,900 | 3,256 | 65   | 65                       | 80   | 80   | 80   | 82   | 81   | 80   | 80   | 80   | 230  | 149            | 73      | 31      | 11      | 10      | 3       | 3  |
| Texas.....                | 478              | 432   | 1,187 | 1,549 | 1,815 | 2,081 | 2,347 | 2,613 | 2,879 | 68   | 73                       | 84   | 87   | 89   | 89   | 89   | 89   | 89   | 89   | 238  | 147            | 73      | 30      | 17      | 15      | 3       | 3  |
| New Mexico.....           | 497              | 375   | 1,075 | 1,381 | 1,687 | 1,993 | 2,299 | 2,605 | 2,911 | 58   | 63                       | 75   | 70   | 79   | 79   | 79   | 79   | 79   | 79   | 238  | 147            | 73      | 30      | 17      | 15      | 3       | 3  |
| Arizona.....              | 391              | 297   | 1,242 | 1,610 | 1,978 | 2,346 | 2,    |       |       |      |                          |      |      |      |      |      |      |      |      |      |                |         |         |         |         |         |    |

rule, only a few industries were responsible for the bulk of the outshift of income. Moreover, in general, the same industries were losers in each of the three regions.

With only occasional exception, industries experiencing substantially below-average growth in each of these 3 industrialized regions included those producing for export to other regions such as primary and fabricated metals, electrical and nonelectrical machinery and nonautomotive transportation equipment.

Because population growth in these three regions has been well below average since 1948, industries producing services for consumption by the local population of these areas also expanded less than did the national average. These include trade, finance, State and local government, and services. On the average, these nine major industries accounted for two-thirds of the shortfall in New England, the Mideast, and Great Lakes.

In some industries, losses due to changes in the geographic distribution of industry were highly concentrated. The migration of the textile industry to the South contributed heavily to New England's income lag. In the Mideast, slower growth stemmed from an outshift of Federal activities, and from losses in the share of apparel and chemical manufacturing. In the Great Lakes, a shift of automotive production to other parts of the Nation and a slowdown in construction activity contributed to the unfavorable experience of this region.

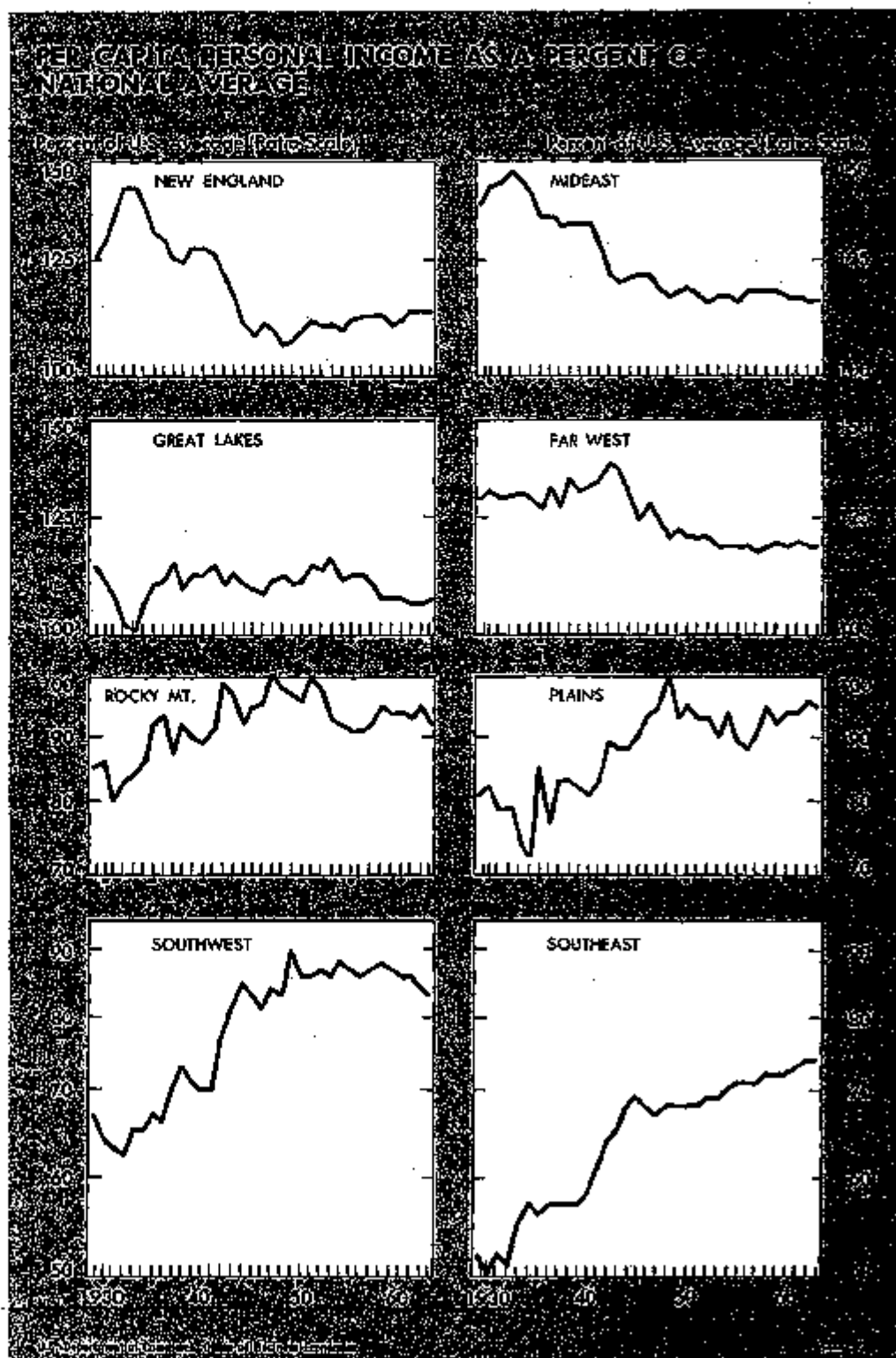
In the Plains States, the story is one of the spreading effects of agricultural decline on industrial activity and population. The reduction in farm income from 1948 to 1962 was primarily responsible for a net loss of nearly one-half billion dollars. It was accompanied by outmigration of the population which in turn, led to below average gains in industries which service the population of the area. These were large in trade, service, and State and local governments.

The share losses of the northern and central regions were mirrored in the gains of the southern and western

sections—as can be seen from the foregoing text tabulation.

Gains were widespread in the Southeast, Southwest, and Far West. In the Rocky Mountain States they were fewer and tended to concentrate in those industries meeting the needs of the local population rather than producing for export from the region.

Gains of particular importance included the shift of food, textiles, and apparel into the Southeast; of non-automotive transportation equipment into the Southwest and Far West; of primary and fabricated metals to the West Coast; and the spectacularly swift growth of services in the Far West.



### Changes in weapons system

The single most important development influencing industry-mix in certain areas was the changing structure of defense procurement.<sup>4</sup> There has been a shift of major proportions in the weapons system of the Defense Department. At the end of the Korean conflict (1953), tanks, other vehicles, weapons, ammunition, etc., constituted half of the military hard goods bought. By 1961, this proportion had dropped to one-eighth. Conversely, missiles and electronics accounted for about 12 percent of prime contract awards in 1953, but by 1961 they took up more than half of all prime military hard goods contracts.

With the concentration of the more conventional types of military hard goods in the Midwest, Great Lakes, and New England areas, and with the tendency for missile and electronic production to be located in the South and West, the shift in defense purchases has had a dramatic effect on regional economic activity. This is illustrated by the following tabulation of the share of total military prime contract awards made in each region during 1951-53 and in 1961. Figures for selected States are also shown.

Percent distribution of total military prime contract awards

|                     | 1951-53 | 1961 |
|---------------------|---------|------|
| New England.....    | 8.1     | 10.5 |
| Massachusetts.....  | 2.6     | 4.9  |
| Midwest.....        | 28.8    | 23.1 |
| New York.....       | 15.3    | 12.0 |
| Great Lakes.....    | 27.4    | 11.8 |
| Michigan.....       | 9.5     | 2.7  |
| Indiana.....        | 4.5     | 1.6  |
| Illinois.....       | 5.0     | 3.0  |
| Ohio.....           | 6.3     | 4.5  |
| Wisconsin.....      | 2.0     | 1.0  |
| Plains.....         | 6.9     | 5.5  |
| Missouri.....       | 2.3     | 1.5  |
| Southeast.....      | 7.1     | 10.5 |
| Florida.....        | 4       | 3.2  |
| Virginia.....       | 1.0     | 2.3  |
| Southwest.....      | 4.1     | 7.1  |
| Texas.....          | 3.2     | 5.1  |
| Rocky Mountain..... | 4       | 4.3  |
| Colorado.....       | 2       | 2.1  |
| Utah.....           | 1       | 1.0  |
| Far West.....       | 17.9    | 22.9 |
| California.....     | 13.6    | 22.9 |
| Washington.....     | 4.0     | 2.9  |

The coincidence between changes in participation income and in shares of defense purchases is too striking to require elaboration. New England is the only region to run counter to pattern. This is a reflection of the sharp increase in contracts let in Massachu-

setts—a development due in part to the superior research and development facilities associated with the State's educational system.

It should be noted that due to an insufficiently detailed industrial classification, some of the foregoing mix effects do not show up in table 4 as industry-mix effects but rather as the results of changes in regional-shares. This is a striking example of the influence that the degree of disaggregation has on the statistical separation of industry-mix and regional-share factors.

### Effects of farm income

Comparison of column E with column J of table 3 indicates that farm income played a larger role than did any other single industry in changing the geographic distribution of income from 1948 to 1962. Its impact in this respect was transmitted mainly through the industry-mix effects. Agriculture is a slow-growth industry—more specifically, it was one of the few industries to show an actual decline from 1948 to 1962. Furthermore, agriculture is distributed throughout the Nation much more unevenly than most other major industries. Given these two factors, it is to be expected that agriculture would have substantial influence in determining the effects of industry-mix on changes in income.

Elimination of farm income from the overall aggregate changes the effects of industry-mix greatly. State differences in industry-mix, including agriculture, caused a shift of about \$10 billion from 1948 to 1962; most of it boosted the incomes of the Northern and Central States and reduced those in the South and West, thereby offsetting much of the effects of area shifts in industries. With agriculture excluded, the geographic redistribution of income due to industry-mix is reduced from \$10 billion to \$2 billion, and in most areas its effects are small.

In several States, however, the industry-mix of the nonfarm economy had considerable effect. Pennsylvania suffered the largest outshift of income due to unfavorable industry-mix. This stemmed mainly from the high proportion of coal mining and textiles in the State's economy.

Industry-mix had an adverse effect on participation income in the Southeast even apart from that due to agriculture. In West Virginia and Kentucky, coal mining exerted a dampening effect; in the two Carolinas and Georgia, textiles limited the relative growth of income even though these States have increased their shares of the industry total.

In the Far West, nonfarm industry-mix caused a relative increase in income. This was the result of a high proportion of services, State and local government, finance, automotive production, and construction in the area economy.

### Investment and Transfer Income

The preceding discussion of changes in income from participation in current production accounts for the bulk of the total income change. Two major components of income—property income (rents, dividends, and interest) and transfer payments—have been omitted because they cannot be allocated industrially.

Together these two components added \$64 billion to the income flow between 1948 and 1963. As shown by the accompanying tabulation, changes in property income generally contributed to the relative shift of the income share from the northeast and central regions to the South and West. Since saving from which investments are made is accumulated out of current income, and since the geographic trend of income change to the South and West has been underway for many years, the relative shift in property income was to be expected.

|                     | Participation income | Property income | Transfer payments |
|---------------------|----------------------|-----------------|-------------------|
| United States.....  | 108                  | 149             | 207               |
| New England.....    | 67                   | 112             | 209               |
| Midwest.....        | 92                   | 127             | 195               |
| Great Lakes.....    | 87                   | 138             | 197               |
| Plains.....         | 73                   | 146             | 199               |
| Southeast.....      | 114                  | 186             | 260               |
| Southwest.....      | 139                  | 171             | 172               |
| Rocky Mountain..... | 117                  | 200             | 178               |
| Far West.....       | 153                  | 197             | 281               |

The amount paid out in the form of transfers depends mainly on population and public policy. Because there was much less variation in rates of change in transfer payments than in income from current production, transfers tended to retard the geographic redistribution of income.

<sup>4</sup>The following paragraphs are based on *The Changing Patterns of Defense Procurement*, Office of the Secretary of Defense, June, 1962.

## Population and Per Capita Incomes

In the following section income trends are viewed as the result of developments in population and per capita incomes. This way of examining changes in the geographic distribution of income differs from that in the previous section where they were seen as the product of industrial forces.

These two approaches throw light on important, and very different, elements of the overall picture. Doubtless there are still other ways of decomposing the total change in income into economically significant factors.

Population changes exercised a powerful influence on the redistribution of income among States over the 1948-63 span. It should be noted that references in this report to relative

losses refer to declines in the *share* or to *below-average* rates of growth and not to absolute income or population losses.

The shift of population after 1948 was from the northeast and central plains to the southwest and west. When weighted by income, there is close coincidence between relative gains and losses in income and in population on both a State and regional

Table 3.—Components of Change in Income from Participation in Current Production, 1948-62<sup>1</sup>

(Millions of dollars)

|                           | Total Participation Income <sup>2</sup> |              |                |                           |                                  | Nonagricultural Participation Income <sup>3</sup> |              |                |                           |                                  |
|---------------------------|---|--------------|----------------|---------------------------|----------------------------------|---|--------------|----------------|---------------------------|----------------------------------|
|                           | Changes due to effect of:               |              |                | Total change <sup>4</sup> | Net relative change <sup>5</sup> | Changes due to effect of:                         |              |                | Total change <sup>4</sup> | Net relative change <sup>5</sup> |
|                           | National growth                         | Industry-mix | Regional-share |                           |                                  | National growth                                   | Industry-mix | Regional-share |                           |                                  |
|                           | A                                       | B            | C              | D                         | E                                | F   | G            | H              | I                         | J                                |
| United States.....        | 173,647                                 |              |                | 173,647                   |                                  | 177,284   |              |                | 177,284                   |                                  |
| New England.....          | 11,182                                  | 1,122        | -1,762         | 10,662                    | -339                             | 12,435  | -54          | -1,617         | 10,764                    | -1,471                           |
| Maine.....                | 884                                     | -104         | -190           | 590                       | -794                             | 868   | -60          | -180           | 643                       | -246                             |
| New Hampshire.....        | 534                                     | -92          | 34             | 556                       | 22                               | 564   | -77          | 60             | 507                       | -17                              |
| Vermont.....              | 342                                     | -26          | -47            | 359                       | -85                              | 334   | -18          | -42            | 274                       | -68                              |
| Massachusetts.....        | 5,644                                   | 740          | -1,200         | 5,184                     | -151                             | 6,387   | 26           | -1,179         | 5,241                     | -1,148                           |
| Rhode Island.....         | 935                                     | 8            | -396           | 647                       | -289                             | 1,087   | -123         | -265           | 670                       | -417                             |
| Connecticut.....          | 2,823                                   | 537          | -23            | 3,337                     | 514                              | 3,155   | 232          | -8             | 3,370                     | 215                              |
| Midwest.....              | 44,577                                  | 5,422        | -3,845         | 46,154                    | -4,426                           | 49,386  | 252          | -3,643         | 49,575                    | -3,411                           |
| New York.....             | 21,191                                  | 3,209        | -4,562         | 19,738                    | -2,458                           | 23,858  | 640          | -5,577         | 18,921                    | -4,837                           |
| New Jersey.....           | 8,571                                   | 1,182        | 9              | 9,762                     | 1,191                            | 7,338   | 388          | 23             | 7,759                     | 421                              |
| Pennsylvania.....         | 12,291                                  | 16           | -4,023         | 8,384                     | -3,910                           | 13,812  | -1,329       | -3,935         | 8,549                     | -5,264                           |
| Delaware.....             | 416                                     | 32           | 180            | 627                       | 192                              | 440   | 13           | 165            | 595                       | 185                              |
| Maryland.....             | 2,768                                   | 516          | 787            | 4,071                     | 1,303                            | 3,051   | 248          | 796            | 4,099                     | 1,048                            |
| District of Columbia..... | 1,290                                   | 968          | -1,117         | 1,141                     | -649                             | 1,486   | 272          | -1,116         | 642                       | -844                             |
| Great Lakes.....          | 46,378                                  | 1,486        | -3,090         | 44,774                    | -6,534                           | 42,109  | 339          | -2,572         | 34,941                    | -7,222                           |
| Michigan.....             | 8,273                                   | 622          | -1,532         | 7,363                     | -1,210                           | 8,974   | 11           | -1,788         | 7,216                     | -1,758                           |
| Ohio.....                 | 10,222                                  | 744          | -1,696         | 9,270                     | -1,132                           | 10,960  | 122          | -1,719         | 9,364                     | -1,596                           |
| Indiana.....              | 4,857                                   | -116         | -376           | 4,365                     | -695                             | 4,306   | 69           | -845           | 4,330                     | -430                             |
| Illinois.....             | 13,030                                  | 432          | -2,432         | 10,030                    | -3,000                           | 13,156  | 136          | -3,218         | 10,474                    | -3,062                           |
| Wisconsin.....            | 3,984                                   | -220         | -354           | 3,410                     | -377                             | 3,606   | 2            | -230           | 3,567                     | -321                             |
| Plains.....               | 18,521                                  | -4,435       | -285           | 13,801                    | -4,706                           | 12,380  | 38           | 121            | 13,154                    | 158                              |
| Minnesota.....            | 3,450                                   | -802         | -85            | 2,563                     | -780                             | 2,955   | -10          | 131            | 3,079                     | 121                              |
| Iowa.....                 | 3,830                                   | -1,510       | -552           | 1,768                     | -2,071                           | 2,194   | 3            | -206           | 1,990                     | -204                             |
| Missouri.....             | 4,440                                   | -415         | -206           | 3,819                     | -621                             | 4,225   | -60          | -134           | 4,031                     | -191                             |
| North Dakota.....         | 717                                     | -408         | 224            | 533                       | -181                             | 374   | 7            | 40             | 421                       | 47                               |
| South Dakota.....         | 802                                     | -444         | 85             | 443                       | -358                             | 415   | 32           | 69             | 506                       | 81                               |
| Nebraska.....             | 1,406                                   | -590         | 56             | 1,128                     | -480                             | 1,120   | 36           | 67             | 1,222                     | 192                              |
| Kansas.....               | 3,073                                   | -427         | 153            | 2,799                     | -275                             | 1,709   | 42           | 164            | 1,905                     | 106                              |
| Southeast.....            | 26,538                                  | -3,929       | 7,163          | 29,772                    | 3,240                            | 25,380  | -1,843       | 6,767          | 29,715                    | 4,334                            |
| Virginia.....             | 8,106                                   | 154          | 664            | 8,924                     | 818                              | 3,175   | 178          | 670            | 4,023                     | 848                              |
| West Virginia.....        | 1,576                                   | -638         | -640           | 498                       | -1,237                           | 2,024   | -759         | -802           | 603                       | -1,361                           |
| Kentucky.....             | 2,593                                   | -569         | 173            | 2,197                     | -416                             | 2,008   | -226         | 147            | 1,080                     | -139                             |
| Tennessee.....            | 2,546                                   | -226         | 137            | 2,457                     | -90                              | 3,453   | -28          | 170            | 3,571                     | 118                              |
| North Carolina.....       | 3,140                                   | -872         | 1,413          | 3,681                     | 541                              | 2,868   | -802         | 1,207          | 3,505                     | 706                              |
| South Carolina.....       | 1,323                                   | -386         | 478            | 1,415                     | 92                               | 1,443   | -257         | 460            | 1,649                     | 206                              |
| Georgia.....              | 2,633                                   | -812         | 1,089          | 3,909                     | 737                              | 2,602   | -214         | 960            | 3,378                     | 746                              |
| Florida.....              | 3,421                                   | 837          | 3,149          | 5,007                     | 3,486                            | 2,580   | 234          | 2,813          | 5,608                     | 3,046                            |
| Alabama.....              | 3,178                                   | -384         | 382            | 3,176                     | -62                              | 2,080   | -168         | 365            | 2,282                     | 170                              |
| Mississippi.....          | 1,348                                   | -470         | 146            | 1,024                     | -322                             | 964   | 8            | 234            | 1,109                     | 245                              |
| Louisiana.....            | 2,149                                   | -50          | 216            | 2,315                     | 166                              | 2,147   | 27           | 226            | 2,400                     | 283                              |
| Arkansas.....             | 1,816                                   | -514         | 71             | 1,373                     | -443                             | 984   | -40          | 107            | 1,001                     | 67                               |
| Southwest.....            | 10,772                                  | -727         | 3,481          | 13,526                    | 2,759                            | 16,286  | 33           | 3,172          | 13,561                    | 3,233                            |
| Oklahoma.....             | 1,925                                   | -226         | 47             | 1,746                     | -180                             | 1,702   | 8            | 121            | 1,801                     | 129                              |
| Texas.....                | 7,589                                   | -451         | 1,771          | 8,909                     | 1,320                            | 7,382   | 3            | 1,628          | 8,880                     | 1,528                            |
| New Mexico.....           | 548                                     | -18          | 492            | 1,022                     | 474                              | 511   | 35           | 485            | 1,011                     | 500                              |
| Arizona.....              | 731                                     | -27          | 1,171          | 1,915                     | 1,144                            | 691   | 37           | 1,001          | 1,789                     | 1,098                            |
| Rocky Mountain.....       | 3,485                                   | -691         | 1,284          | 4,078                     | 589                              | 3,422   | -30          | 1,253          | 4,588                     | 1,163                            |
| Montana.....              | 764                                     | -276         | 27             | 515                       | -268                             | 566   | -40          | -23            | 593                       | -68                              |
| Idaho.....                | 622                                     | -196         | 74             | 500                       | -122                             | 496   | -35          | 37             | 518                       | 32                               |
| Wyoming.....              | 367                                     | -72          | -30            | 265                       | -102                             | 338   | -28          | -40            | 266                       | -68                              |
| Colorado.....             | 1,428                                   | -129         | 808            | 2,107                     | 789                              | 1,338   | 27           | 947            | 2,306                     | 967                              |
| Utah.....                 | 633                                     | -19          | 311            | 925                       | 302                              | 806   | -17          | 312            | 958                       | 205                              |
| Far West.....             | 19,234                                  | 1,780        | 7,978          | 29,092                    | 9,759                            | 28,877  | 1,286        | 7,539          | 29,591                    | 6,894                            |
| Washington.....           | 3,086                                   | -234         | 2,064          | 4,916                     | 1,830                            | 3,118   | 192          | -275           | 3,037                     | -88                              |
| Oregon.....               | 1,946                                   | -211         | -201           | 1,534                     | -411                             | 1,056   | -176         | -187           | 1,699                     | -383                             |
| Nevada.....               | 230                                     | 8            | 482            | 717                       | 487                              | 521   | 9            | 487            | 727                       | 486                              |
| California.....           | 14,591                                  | 1,819        | 7,981          | 24,391                    | 9,752                            | 18,377  | 1,280        | 7,517          | 24,164                    | 8,777                            |

<sup>1</sup> Derivation of each component is explained on page 26.

<sup>2</sup> Income from participation in current production is the sum of wages and salaries, proprietors' income, and other labor income.

<sup>3</sup> Sum of columns A, B, and C for total participation income and of F, G, and H for nonagricultural participation income.

<sup>4</sup> Sum of columns B and C for total participation income and of G and H for nonagricultural

participation income. Represents the amount by which a State or region exceeded or fell short of the national rate of growth.

<sup>5</sup> Note.—An industry distribution of column B is given in table 4 and of column C in table 5. Figures are not available for Alaska and Hawaii because of their exclusion from the State Series in 1953 (prior to Statehood). Detail will not add to totals due to rounding.

Source: U.S. Department of Commerce, Office of Business Economics.

basis. Only in the Southeast and Great Lakes, and to a lesser extent in New England, were there substantial departures from this parallelism. In the Southeast, population changes accounted for only a small portion of the above-average income expansion. The bulk of that region's income improvement came from higher average incomes generated within its economy. A reverse situation obtained in the Great Lakes States, which sustained a sizable loss in its income share in the postwar period. Only a minor portion of this can be explained by population shifts; the bulk of the decline reflects a less-than-average rise in income per person. In the New England States, increased average incomes relative to the national figure offset a large portion of the income loss due to the population shift.

In order to examine more closely the relationship between geographical shifts in income and population, the latter have been divided into changes due to: (1) natural increase, (2) domestic nonwhite migration, (3) domestic white migration, and (4) net immigration from abroad. State figures for items 1 and 2, and for 3 and 4 combined were obtained from Census of Population data. The series, which covered the years 1950-60, were extended to 1962 on the basis of the trend of the past decade. Net immigration from abroad was estimated by States from information obtained from the Bureau of the Census and from the Immigration Service.

For the purpose of obtaining a rough approximation of the effect of population change on the geographic distribution of income, the number of migrants in each group was multiplied by an assumed average income of that particular group in each State. Per capita incomes of domestic migrants—separately for whites and nonwhites—was assumed to be the same as those of nonmigrants; however, estimates for each State were computed from relationships between the median incomes of whites, nonwhites, and the total population as derived from State data in the 1960 Census of Population. Average incomes of immigrants from abroad were assumed to be three-fourths that of the residents of the State to

which they immigrated. Average incomes of those in the natural-increase component were assumed to equal the overall per capita income in the appropriate State.

The national total of change due to each of the 4 components was derived as the sum of the product of the number of persons and their assumed per capita income in each State. Next, these national totals were allocated in accordance with the State distribution of total income in the base period in order to derive distributions of the components had each State shared proportionately in the income effect of change in the several components population growth. The difference between the "actual" distribution and the "proportionate" distribution formed a measure of the effect of the particular component of population change on the total income distribution.

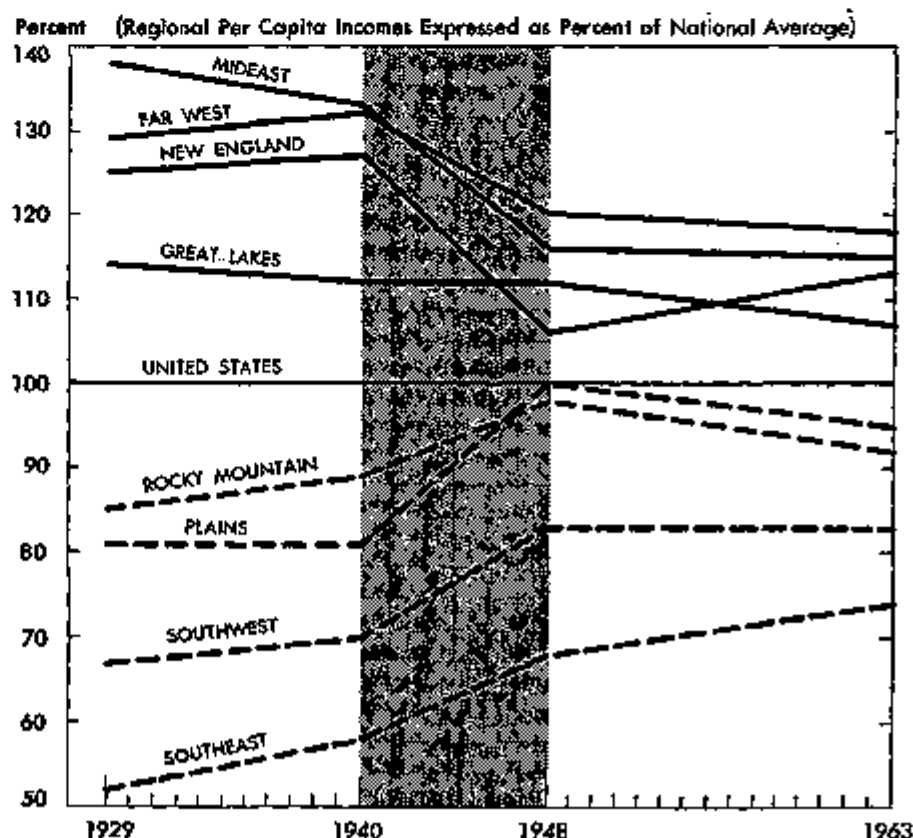
### Effects of nonwhite migration

Migration of the nonwhite population was a strong factor in the redistribution of income among States. It appears that an income shift of close to \$2 billion may have resulted from the migration of this group. Except in California, its impact, where significant, generally ran counter to relative changes in the income flow.

Essentially, migration of nonwhites was from the South to the North and West with a handful of States accounting for the bulk of the movement. More than half of the income shifts due to this migration centered in the five States of North Carolina, South Carolina, Georgia, Alabama, and Mississippi. This outmigration of Negroes accounts in part for the tapering in the rate of overall income growth which

### RELATIVE REGIONAL DIFFERENCES IN PER CAPITA PERSONAL INCOME

Regional Differences in Average Income Levels Narrowed Sharply During World War II and Reconversion; Since Then Convergence Has Been Small



characterized the Southeast during the postwar years.

New York, Illinois, and California received the bulk of the relative gains stemming from the migration of Negroes, with most of the remainder accruing to New Jersey, Michigan, Ohio, and the District of Columbia.

The impact of nonwhite migration is assessed here in terms of changes in aggregate income only. Its effect on

geographic differences in such items as economic welfare, fiscal capacity, and tax structures may have been quite different. Certainly its effect on per capita income levels was the opposite of its impact on total income.

#### Migration of the white population

Internal migration of the white population contributed even more to income

redistribution among States and regions than did that of the nonwhites, although the impact was more widely diffused among States. Generally, the force of this factor was in accord with the changes in overall economic activity, with migrants moving from the northern and central States to the southern and western areas.

In dollar terms, the largest outshifts occurred in the Mideast, with the bulk

(Millions of dollars)

Table 4.—Industrial Breakdown of Income

|                           | Industries with below-average rate of growth |            |            |                 |                        |         |          |         |                      |                    |         |                              |                             |             | Participation Income <sup>1</sup> |        |        | Other |
|---------------------------|--|------------|------------|-----------------|------------------------|---------|----------|---------|----------------------|--------------------|---------|------------------------------|-----------------------------|-------------|-----------------------------------|--------|--------|-------|
|                           | Mining payrolls                              |            |            |                 | Manufacturing payrolls |         |          |         |                      |                    |         |                              |                             |             |                                   |        |        |       |
|                           | Metal  | Anthracite | Bituminous | Crude petroleum | Food                   | Tobacco | Textiles | Apparel | Lumber and furniture | Petroleum refining | Leather | Motor vehicles and equipment | Machinery except electrical | Agriculture | Transportation                    | Trade  |        |       |
| United States.....        | -138   | -499       | -2,288     | -67             | -1,081                 | -41     | -3,368   | -1,324  | -1,335               | -359               | -400    | -183                         | -19                         | -24,393     | -4,694                            | -5,524 | -1,655 |       |
| New England.....          | (9)  |            | (9)        | (9)             | -48                    | -1      | -608     | -83     | -84                  | -8                 | -166    | -1                           | -1                          | -462        | -101                              | -385   | -35    |       |
| Maine.....                |  |            |            |                 | -6                     |         | -74      | -1      | -26                  |                    | -22     |                              |                             | -128        | -18                               | -28    | -8     |       |
| New Hampshire.....        |  |            |            |                 | -1                     | (9)     | -60      | -3      | -11                  |                    | -20     |                              |                             | -22         | -6                                | -15    | -5     |       |
| Vermont.....              | (9)  |            |            |                 | -2                     |         | -14      | -2      | -10                  | (9)                |         |                              |                             | -62         | -8                                | -10    | -4     |       |
| Massachusetts.....        | (9)  |            | (9)        | (9)             | -30                    | (9)     | -384     | -55     | -30                  | -6                 | -110    | -1                           | (9)                         | -119        | -101                              | -183   | -61    |       |
| Rhode Island.....         |  |            |            |                 | -3                     |         | -178     | -3      | -1                   | -1                 | -1      | (9)                          | (9)                         | -14         | -13                               | -27    | -10    |       |
| Connecticut.....          |  |            |            |                 | -7                     | (9)     | -120     | -20     | -8                   | -1                 | -3      | (9)                          | (9)                         | -100        | -62                               | -77    | -18    |       |
| Mideast.....              | -10  | -499       | -544       | -2              | -232                   | -12     | -651     | -842    | -198                 | -127               | -159    | -15                          | -2                          | -1,410      | -1,297                            | -1,473 | -547   |       |
| New York.....             | -7   |            | -1         | -1              | -117                   | -2      | -278     | -590    | -105                 | -31                | -125    | -7                           | -1                          | -673        | -520                              | -700   | -299   |       |
| New Jersey.....           | -2   |            | (9)        |                 | -38                    | -2      | -210     | -89     | -22                  | -25                | -19     | -3                           | (9)                         | -139        | -170                              | -193   | -72    |       |
| Pennsylvania.....         | -1   | -499       | -535       | -2              | -70                    | -8      | -308     | -135    | -52                  | -60                | -43     | -4                           | -1                          | -475        | -373                              | -527   | -146   |       |
| Delaware.....             |  |            |            |                 | -3                     |         | -6       | -1      | -1                   | (9)                | -5      | (9)                          |                             | -39         | -18                               | -11    | -2     |       |
| Maryland.....             |  |            | -8         |                 | -21                    | (9)     | -40      | -26     | -11                  | -8                 | -6      | -1                           | (9)                         | -143        | -85                               | -85    | -24    |       |
| District of Columbia..... |  |            |            |                 | -4                     |         |          | (9)     | -1                   |                    |         |                              |                             |             | -24                               | -35    | -4     |       |
| Great Lakes.....          | -14  |            | -355       | -5              | -282                   | -3      | -142     | -150    | -282                 | -82                | -118    | -125                         | -5                          | -4,461      | -975                              | -1,214 | -387   |       |
| Michigan.....             | -11  |            | (9)        | -1              | -20                    | (9)     | -17      | -8      | -83                  | -5                 | -16     | -7                           | -1                          | -574        | -134                              | -242   | -51    |       |
| Ohio.....                 | (9)  |            | -106       | -1              | -53                    | -1      | -41      | -39     | -59                  | -10                | -24     | -14                          | -2                          | -827        | -273                              | -236   | -71    |       |
| Indiana.....              |  |            | -64        | (9)             | -34                    | (9)     | -17      | -15     | -46                  | -28                | -4      | -14                          | (9)                         | -809        | -127                              | -134   | -26    |       |
| Illinois.....             | (9)  |            | -135       | -3              | -128                   | (9)     | -37      | -76     | -80                  | -20                | -45     | -5                           | -2                          | -1,512      | -238                              | -420   | -117   |       |
| Wisconsin.....            | -2   |            |            |                 | -40                    | (9)     | -30      | -10     | -46                  | -2                 | -34     | -7                           | -1                          | -739        | -70                               | -118   | -18    |       |
| Plains.....               | -28  |            | -24        | -1              | -154                   | -1      | -23      | -40     | -58                  | -17                | -82     | -14                          | -1                          | -5,183      | -483                              | -512   | -79    |       |
| Minnesota.....            | -19  |            |            |                 | -38                    |         | -13      | -11     | -17                  | -3                 | -9      | -1                           | (9)                         | -1,041      | -103                              | -114   | -17    |       |
| Iowa.....                 |  |            | -15        |                 | -39                    |         | -3       | -4      | -11                  | -1                 | -1      | (9)                          | (9)                         | -1,806      | -96                               | -91    | -19    |       |
| Missouri.....             | -6   |            | -10        |                 | -60                    | -1      | -7       | -42     | -22                  | -5                 | -8      | -3                           | (9)                         | -912        | -144                              | -157   | -25    |       |
| North Dakota.....         |  |            | -3         |                 | -2                     |         |          | (9)     | -2                   | (9)                |         |                              | (9)                         | -462        | -10                               | -20    | -2     |       |
| South Dakota.....         | -2   |            |            |                 | -5                     |         |          |         | -2                   |                    |         |                              |                             | -530        | -11                               | -20    | -1     |       |
| Nebraska.....             |  |            |            |                 | -17                    |         |          | -1      | -2                   | (9)                | (9)     | (9)                          |                             | -748        | -40                               | -40    | -5     |       |
| Kansas.....               | -1   |            | -6         | -3              | -20                    |         | (9)      | -2      | -2                   | -10                | (9)     | -1                           |                             | -604        | -73                               | -62    | -19    |       |
| Southeast.....            | -14  |            | -1,280     | -9              | -125                   | -27     | -1,386   | -101    | -186                 | -50                | -40     | -13                          | (9)                         | -5,390      | -703                              | -771   | -199   |       |
| Virginia.....             | -1   |            | -102       |                 | -11                    | -6      | -94      | -13     | -40                  | (9)                | -8      | (9)                          | (9)                         | -414        | -97                               | -87    | -14    |       |
| West Virginia.....        |  |            | -732       | -1              | -35                    | -1      | -3       | -3      | -12                  | -4                 | -2      | (9)                          | (9)                         | -141        | -65                               | -42    | -9     |       |
| Kentucky.....             |  |            | -276       | -1              | -18                    | -3      | -8       | -12     | -24                  | -2                 | -14     | (9)                          | (9)                         | -676        | -75                               | -60    | -12    |       |
| Tennessee.....            | -2   |            | -36        |                 | -15                    | -1      | -78      | -15     | -34                  | -1                 | -17     | (9)                          | (9)                         | -492        | -71                               | -79    | -12    |       |
| North Carolina.....       | (9)  |            | (9)        |                 | -10                    | -13     | -511     | -8      | -58                  | (9)                | -2      | (9)                          | (9)                         | -747        | -56                               | -83    | -30    |       |
| South Carolina.....       |  |            |            |                 | -4                     | -1      | -318     | -7      | -23                  | (9)                | (9)     | (9)                          |                             | -320        | -29                               | -38    | -8     |       |
| Georgia.....              | (9)  |            | (9)        |                 | -16                    | (9)     | -330     | -21     | -42                  | (9)                | -1      | (9)                          | (9)                         | -442        | -70                               | -88    | -28    |       |
| Florida.....              | (9)  |            |            |                 | -18                    | (9)     | -2       | -2      | -28                  | (9)                | (9)     | (9)                          |                             | -236        | -73                               | -96    | -14    |       |
| Alabama.....              | -9   |            | -165       |                 | -7                     | (9)     | -121     | -6      | -30                  | (9)                | -1      | (9)                          | (9)                         | -461        | -81                               | -93    | -20    |       |
| Mississippi.....          |  |            |            | -1              | -4                     |         | -9       | -8      | -32                  | (9)                | (9)     | (9)                          | (9)                         | -614        | -23                               | -31    | -18    |       |
| Louisiana.....            |  |            |            | -6              | -16                    | (9)     | -4       | -3      | -34                  | (9)                | (9)     | (9)                          | (9)                         | -261        | -70                               | -84    | -25    |       |
| Arkansas.....             | -2   |            | -10        | -1              | -6                     |         | -3       | -3      | -36                  | -3                 | (9)     | (9)                          | (9)                         | -306        | -38                               | -34    | -14    |       |
| Southwest.....            | -26  |            | -19        | -37             | -61                    | (9)     | -22      | -21     | -60                  | -104               | -13     | -1                           | (9)                         | -2,164      | -313                              | -367   | -185   |       |
| Oklahoma.....             | -3   |            | -11        | -10             | -10                    |         | -8       | -1      | -6                   | -10                | (9)     | (9)                          | (9)                         | -467        | -46                               | -84    | -19    |       |
| Texas.....                | -1   |            | (9)        | -25             | -37                    | (9)     | -19      | -20     | -98                  | -94                | (9)     | (9)                          | (9)                         | -1,430      | -331                              | -284   | -100   |       |
| New Mexico.....           | -4   |            | -7         | -1              | -1                     |         | (9)      | -3      | -3                   | -1                 | (9)     | (9)                          | (9)                         | -121        | -10                               | -10    | -3     |       |
| Arizona.....              | -18  |            |            |                 | -3                     |         | (9)      | (9)     | -3                   |                    | (9)     | (9)                          | (9)                         | -130        | -20                               | -24    | -8     |       |
| Rocky Mountain.....       | -14  |            | -78        | -3              | -24                    |         | -1       | -2      | -33                  | -18                | -2      | (9)                          | (9)                         | -1,054      | -154                              | -128   | -36    |       |
| Montana.....              | -10  |            | -5         | (9)             | -3                     |         |          |         | -8                   | -2                 |         | (9)                          | (9)                         | -310        | -28                               | -21    | -10    |       |
| Idaho.....                | -8   |            |            |                 | -4                     |         |          |         | -18                  | (9)                |         | (9)                          | (9)                         | -235        | -17                               | -20    | -5     |       |
| Wyoming.....              | (9)  |            | -20        | -2              | -1                     |         |          | -2      | -1                   | -8                 |         | (9)                          | (9)                         | -80         | -18                               | -10    | -3     |       |
| Colorado.....             | -5   |            | -20        | -1              | -11                    |         | (9)      | -2      | -4                   | -1                 | (9)     | (9)                          | (9)                         | -350        | -44                               | -51    | -10    |       |
| Utah.....                 | -11  |            | -27        | (9)             | -5                     |         | -1       | -1      | -2                   | -2                 | (9)     | (9)                          | (9)                         | -94         | -25                               | -23    | -4     |       |
| Far West.....             | -10  |            | -8         | -8              | -135                   | -1      | -36      | -68     | -410                 | -68                | -11     | -8                           | (9)                         | -3,227      | -621                              | -731   | -227   |       |
| Washington.....           | -2   |            |            |                 | -20                    |         | -8       | -3      | -117                 | (9)                | (9)     | (9)                          | (9)                         | -490        | -86                               | -102   | -22    |       |
| Oregon.....               | (9)  |            |            |                 | -12                    |         | -8       | -8      | -126                 | (9)                | -1      | (9)                          | (9)                         | -294        | -82                               | -70    | -30    |       |
| Nevada.....               | -4   |            |            |                 | (9)                    |         |          |         | -1                   |                    |         | (9)                          | (9)                         | -36         | -10                               | -6     | -2     |       |
| California.....           | -6   |            | (9)        | -8              | -100                   | -1      | -26      | -62     | -136                 | -80                | -10     | -4                           | (9)                         | -1,458      | -374                              | -343   | -187   |       |

<sup>1</sup> These data represent an industrial distribution of totals in column 2, table 3.  
<sup>2</sup> Consists of payrolls, other labor income, and proprietors' income.

<sup>3</sup> Includes proprietors' incomes and other labor income in manufacturing and mining and participation income in several minor industries.

sustained by New York, Pennsylvania, and the District of Columbia. In proportion to the aggregate income base, however, by far the largest impact of migration occurred in the Plains States, where income in 1962 is estimated as \$2 billion, or 6 percent, less than it would have been had no out-migration occurred. In New England, the main migration was from Massachusetts, while in the Great Lakes it

was from Illinois, Wisconsin, and Michigan.

The Southeast provided an exception to pattern. In that expanding economy, migration of whites reduced the income share in all States except Virginia, Louisiana, and Florida. In Florida, a tremendous influx of white migrants from other parts of the country accounted for more than three-fourths of the State's total net gain in income,

and almost balanced the below-average income gains of the other States of the region.

Migration of the white population added to the income flow in the other southern and western regions. In the Southwest and Rocky Mountain States, the increment was small; in the Far West, it accounted for about two-thirds of the income increase scored by the region.

### Change Due to Industry-Mix Effects, 1945-62<sup>1</sup>

(Millions of dollars)

|                           |     | Industries with above-average rate of growth |                        |          |           |        |                        |  |                           |                      |   |              |                                    |         |            |                 |          |                    | Total all industries <sup>2</sup> |
|---------------------------|-----|--|------------------------|----------|-----------|--------|------------------------|--|---------------------------|----------------------|---|--------------|------------------------------------|---------|------------|-----------------|----------|--------------------|-----------------------------------|
|                           |     | Non-metallic mining payrolls                 | Manufacturing payrolls |          |           |        |                        |  |                           |                      | Participation income <sup>2</sup>       |              |                                    |         | Government |                 |          | Other <sup>2</sup> |                                   |
|                           |     |  | Paper                  | Printing | Chemicals | Rubber | Stone, clay, and glass | Ordinance, primary and fabricated metals | Instrument and electronic | Electrical machinery | Non-automotive transportation equipment | Construction | Communication and public utilities | Service | Finance    | State and local | Civilian |                    |                                   |
| United States.....        | 45  | 640  | 419                    | 2,202    | 123       | 84     | 826                    | 393                                      | 3,322                     | 2,572                | 2,914                                   | 1,433        | 1,067                              | 5,693   | 11,599     | 2,799           | 2,741    | 112                |                                   |
| New England.....          | 2   | 92   | 28                     | 56       | 30        | 4      | 67                     | 72                                       | 421                       | 313                  | 169                                     | 104          | 445                                | 446     | 330        | 141             | 146      | 14                 | 1,122                             |
| Maine.....                | (9) | 26   | 1                      | 1        | (9)       | (9)    | 1                      | 1  | (9)                       | 10                   | 15                                      | 7            | 23                                 | 19      | 86         | 12              | 10       | 3                  | -104                              |
| New Hampshire.....        | (9) | 10   | 1                      | (9)      | (9)       | (9)    | 1                      | 1  | 4                         | (9)                  | 8                                       | 6            | 23                                 | 14      | 41         | 10              | 6        | (9)                | -92                               |
| Vermont.....              | (9) | 3  | 1                      | (9)      | (9)       | (9)    | 1                      | 1  | 2                         | (9)                  | 5                                       | 3            | 18                                 | 8       | 26         | 4               | 2        | (9)                | -38                               |
| Massachusetts.....        | 1   | 43   | 18                     | 32       | 13        | 3      | 22                     | 39                                       | 270                       | 60                   | 83                                      | 54           | 321                                | 285     | 482        | 81              | 69       | 7                  | 759                               |
| Rhode Island.....         | (9) | 2  | 2                      | 2        | 3         | (9)    | 0                      | 12                                       | 19                        | 1                    | 12                                      | 10           | 40                                 | 31      | 57         | 15              | 35       | 1                  | 8                                 |
| Connecticut.....          | (9) | 10   | 0                      | 15       | 6         | 1      | 37                     | 30                                       | 123                       | 147                  | 40                                      | 24           | 134                                | 132     | 198        | 17              | 23       | 2                  | 557                               |
| Midwest.....              | 10  | 175  | 156                    | 446      | 21        | 27     | 572                    | 184                                      | 1,329                     | 801                  | 666                                     | 429          | 1,476                              | 2,065   | 3,130      | 830             | 489      | 30                 | 5,433                             |
| New York.....             | 4   | 87   | 101                    | 141      | 6         | 8      | 67                     | 118                                      | 438                       | 241                  | 279                                     | 215          | 1,462                              | 1,220   | 1,782      | 230             | 130      | 6                  | 3,269                             |
| New Jersey.....           | 1   | 82   | 12                     | 158      | 3         | 5      | 20                     | 35                                       | 375                       | 171                  | 190                                     | 62           | 364                                | 250     | 403        | 64              | 129      | 3                  | 1,193                             |
| Pennsylvania.....         | 4   | 48   | 31                     | 83       | 5         | 13     | 158                    | 27                                       | 422                       | 232                  | 181                                     | 102          | 574                                | 365     | 604        | 162             | 70       | 4                  | 1,135                             |
| Delaware.....             | 1   | 1  | (9)                    | 39       | 1         | (9)    | 2                      | (9)                                      | (9)                       | 4                    | 7                                       | 2            | 19                                 | 16      | 21         | 3               | 3        | (9)                | 35                                |
| Maryland.....             | 1   | 0  | 5                      | 18       | 2         | (9)    | 18                     | 3  | 45                        | 182                  | 63                                      | 20           | 156                                | 96      | 160        | 119             | 90       | 3                  | 515                               |
| District of Columbia..... | 1   | 1  | 6                      | (9)      | (9)       | (9)    | (9)                    | (9)                                      | (9)                       | 16                   | 12                                      | 100          | 44                                 | 53      | 240        | 63              | 1        | 1                  | 498                               |
| Great Lakes.....          | 11  | 199  | 130                    | 257      | 43        | 24     | 362                    | 93                                       | 1,266                     | 536                  | 412                                     | 369          | 1,361                              | 1,741   | 2,668      | 360             | 387      | 14                 | 1,458                             |
| Michigan.....             | 2   | 43   | 14                     | 65       | 7         | 3      | 72                     | 13                                       | 114                       | 89                   | 123                                     | 64           | 200                                | 198     | 623        | 53              | 38       | 2                  | 922                               |
| Ohio.....                 | 3   | 48   | 23                     | 75       | 48        | 12     | 124                    | 34                                       | 382                       | 128                  | 162                                     | 78           | 446                                | 295     | 406        | 112             | 65       | 6                  | 744                               |
| Indiana.....              | 3   | 12   | 6                      | 37       | 7         | 4      | 60                     | 7  | 188                       | 136                  | 72                                      | 32           | 182                                | 107     | 304        | 20              | 20       | 2                  | -110                              |
| Illinois.....             | 3   | 40   | 60                     | 79       | 8         | 6      | 64                     | 41                                       | 479                       | 159                  | 197                                     | 111          | 632                                | 477     | 788        | 137             | 129      | 4                  | 432                               |
| Wisconsin.....            | 1   | 50   | 6                      | 11       | 3         | 1      | 23                     | 3  | 93                        | 24                   | 36                                      | 20           | 160                                | 98      | 267        | 29              | 12       | 1                  | -234                              |
| Plains.....               | 5   | 27   | 32                     | 59       | 3         | 6      | 28                     | 14                                       | 145                       | 110                  | 246                                     | 112          | 475                                | 436     | 1,491      | 189             | 112      | 6                  | -4,448                            |
| Minnesota.....            | 1   | 18   | 9                      | 9        | (9)       | 2      | 8                      | 3  | 34                        | 4                    | 68                                      | 24           | 143                                | 103     | 264        | 34              | 13       | 2                  | -632                              |
| Iowa.....                 | 1   | 2  | 5                      | 6        | 1         | 1      | 4                      | 3  | 15                        | 7                    | 43                                      | 18           | 116                                | 70      | 193        | 21              | 10       | 1                  | -1,519                            |
| Missouri.....             | 3   | 11   | 12                     | 30       | (9)       | 3      | 13                     | 6  | 89                        | 48                   | 70                                      | 37           | 210                                | 156     | 230        | 68              | 23       | 2                  | -415                              |
| North Dakota.....         | (9) | (9)  | (9)                    | (9)      | (9)       | (9)    | (9)                    | (9)                                      | (9)                       | 9                    | 4                                       | 4            | 30                                 | 9       | 47         | 8               | 3        | (9)                | -405                              |
| South Dakota.....         | (9) | (9)  | (9)                    | (9)      | (9)       | (9)    | (9)                    | (9)                                      | (9)                       | 10                   | 4                                       | 24           | 11                                 | 51      | 10         | 7               | (9)      | (9)                | -444                              |
| Nebraska.....             | (9) | (9)  | (9)                    | (9)      | (9)       | (9)    | (9)                    | (9)                                      | (9)                       | 22                   | 8                                       | 62           | 40                                 | 111     | 22         | 12              | (9)      | (9)                | -544                              |
| Kansas.....               | 1   | 2  | 3                      | 8        | (9)       | 1      | 2                      | (9)                                      | 4                         | 40                   | 36                                      | 17           | 57                                 | 43      | 146        | 26              | 46       | 1                  | -427                              |
| Southeast.....            | 14  | 89   | 29                     | 241      | 6         | 12     | 67                     | 18                                       | 63                        | 215                  | 441                                     | 186          | 1,396                              | 683     | 1,748      | 541             | 569      | 25                 | -3,929                            |
| Virginia.....             | 1   | 13   | 2                      | 52       | (9)       | 1      | 3                      | 1  | (9)                       | 82                   | 57                                      | 30           | 137                                | 88      | 193        | 180             | 251      | 5                  | 184                               |
| West Virginia.....        | (9) | 2  | 2                      | 44       | (9)       | 1      | 13                     | 1  | 17                        | 0                    | 23                                      | 20           | 66                                 | 31      | 121        | 14              | 10       | (9)                | -638                              |
| Kentucky.....             | 1   | 1  | 3                      | 0        | 1         | 1      | 7                      | 2  | 13                        | 4                    | 34                                      | 15           | 66                                 | 45      | 127        | 32              | 98       | 1                  | -530                              |
| Tennessee.....            | 2   | 6  | 4                      | 64       | 3         | 1      | 0                      | 2  | 6                         | 6                    | 45                                      | 18           | 128                                | 73      | 168        | 35              | 37       | 1                  | -926                              |
| North Carolina.....       | 1   | 12   | 3                      | 3        | (9)       | 1      | 2                      | 1  | 18                        | 3                    | 45                                      | 17           | 142                                | 62      | 189        | 34              | 108      | 2                  | -872                              |
| South Carolina.....       | 1   | 8  | 1                      | 4        | (9)       | (9)    | (9)                    | (9)                                      | 3                         | 3                    | 22                                      | 9            | 66                                 | 26      | 88         | 27              | 35       | 1                  | -396                              |
| Georgia.....              | 3   | 11   | 4                      | 11       | (9)       | 1      | 3                      | 1  | 4                         | 4                    | 45                                      | 22           | 139                                | 83      | 104        | 54              | 75       | 4                  | -313                              |
| Florida.....              | 3   | 10   | 4                      | 8        | (9)       | 1      | 1                      | 1  | 18                        | 10                   | 71                                      | 19           | 193                                | 111     | 209        | 49              | 65       | 6                  | 337                               |
| Alabama.....              | 1   | 7  | 2                      | 8        | (9)       | 1      | 13                     | (9)                                      | 1                         | 40                   | 23                                      | 14           | 98                                 | 43      | 147        | 44              | 32       | 1                  | -334                              |
| Mississippi.....          | (9) | 6  | 1                      | 6        | (9)       | (9)    | (9)                    | (9)                                      | 2                         | 8                    | 16                                      | 8            | 67                                 | 21      | 64         | 21              | 25       | 1                  | -478                              |
| Louisiana.....            | 2   | 20   | 2                      | 22       | (9)       | 1      | 2                      | (9)                                      | (9)                       | 33                   | 42                                      | 22           | 122                                | 28      | 270        | 34              | 35       | 3                  | -59                               |
| Arkansas.....             | 1   | 4  | 1                      | 3        | (9)       | 1      | 1                      | 1  | 1                         | 17                   | 9                                       | 5            | 52                                 | 24      | 71         | 16              | 23       | 1                  | -514                              |
| Southwest.....            | 5   | 7  | 14                     | 56       | 2         | 3      | 14                     | 3  | 4                         | 304                  | 246                                     | 34           | 878                                | 317     | 742        | 192             | 264      | 6                  | -722                              |
| Oklahoma.....             | (9) | (9)  | 2                      | 2        | 1         | 1      | 3                      | (9)                                      | 1                         | (9)                  | 33                                      | 18           | 95                                 | 56      | 135        | 42              | 25       | 1                  | -226                              |
| Texas.....                | 4   | 7  | 10                     | 46       | 1         | 2      | 9                      | 2  | 5                         | 108                  | 180                                     | 64           | 380                                | 237     | 628        | 118             | 191      | 4                  | -45                               |
| New Mexico.....           | 1   | (9)  | 1                      | 5        | (9)       | (9)    | (9)                    | (9)                                      | (9)                       | 14                   | 4                                       | 37           | 10                                 | 50      | 16         | 20              | (9)      | (9)                | -38                               |
| Arizona.....              | (9) | (9)  | 1                      | 1        | (9)       | 1      | (9)                    | (9)                                      | (9)                       | 18                   | 8                                       | 46           | 22                                 | 70      | 16         | 18              | (9)      | (9)                | -27                               |
| Rocky Mountain.....       | 3   | 1  | 5                      | 5        | 2         | 1      | 10                     | 2  | 1                         | 2                    | 74                                      | 32           | 177                                | 34      | 294        | 52              | 66       | 1                  | -691                              |
| Montana.....              | (9) | 1  | 1                      | (9)      | (9)       | (9)    | 2                      | (9)                                      | (9)                       | (9)                  | 11                                      | 5            | 28                                 | 13      | 30         | 12              | 6        | (9)                | -278                              |
| Idaho.....                | (9) | 1  | 1                      | (9)      | (9)       | (9)    | 1                      | (9)                                      | (9)                       | (9)                  | 10                                      | 5            | 24                                 | 12      | 45         | 9               | 3        | (9)                | -198                              |
| Wyoming.....              | (9) | (9)  | (9)                    | (9)      | (9)       | (9)    | (9)                    | (9)                                      | (9)                       | (9)                  | 10                                      | 2            | 16                                 | 7       | 25         | 8               | 10       | (9)                | -72                               |
| Colorado.....             | (9) | 1  | 3                      | 2        | (9)       | (9)    | 4                      | 1  | 1                         | 1                    | 28                                      | 14           | 90                                 | 43      | 107        | 33              | 31       | (9)                | -129                              |
| Utah.....                 | (9) | (9)  | 1                      | (9)      | (9)       | (9)    | 4                      | (9)                                      | (9)                       | (9)                  | 10                                      | 6            | 30                                 | 19      | 61         | 30              | 7        | (9)                | -19                               |
| Far West.....             | 6   | 48   | 34                     | 78       | 7         | 7      | 45                     | 15                                       | 58                        | 637                  | 466                                     | 176          | 1,256                              | 779     | 1,640      | 424             | 547      | 25                 | 1,736                             |
| Washington.....           | 1   | 22   | 4                      | 22       | 1         | 1      | 6                      | 1  | 5                         | 111                  | 77                                      | 24           | 132                                | 107     | 249        | 79              | 104      | 5                  | 174                               |
| Oregon.....               | 1   | 8  | 3                      | 2        | (9)       | (9)    | 3                      | 1  | 2                         | 6                    | 36                                      | 16           | 104                                | 58      | 136        | 28              | 10       | 3                  | -311                              |
| Nevada.....               | (9) | (9)  | 1                      | 1        | (9)       | (9)    | (9)                    | (9)                                      | (9)                       | 7                    | 2                                       | 28           | 4                                  | 30      | 5          | 2               | (9)      | (9)                | 5                                 |
| California.....           | 4   | 10   | 29                     | 82       | 6         | 6      | 36                     | 13                                       | 64                        | 496                  | 327                                     | 132          | 678                                | 610     | 1,240      | 312             | 432      | 19                 | 1,831                             |

<sup>1</sup> Algebraic sum of industry-mix effects of all industries, both positive and negative.  
<sup>2</sup> Less than \$500,000.

NOTE.—Figures are not available for Alaska and Hawaii because of their exclusion from the State series in 1948 (prior to statehood). Detail will not add to totals due to rounding.

Source: U.S. Department of Commerce, Office of Business Economics.

Internal migration of the white population has three special facets. Out-migration of the whites was widely diffused among States. Such migration apparently was the result of a search on the part of individuals for improved economic opportunities, and for better living conditions in the form of climate, scenery, etc. This is seen in the shift of population from the older and more mature industrial areas of the Northeast

and Great Lakes sections, from the coal mining areas of Appalachia, and from the agricultural sections of the Nation, generally.

In contrast, the immigration of whites into a region appears to have concentrated in selected States and perhaps even selected areas within those States. For example, attributes such as climate, scenery, physical features—the amenity-resources—the location of new indus-

tries, and the establishment of research and educational organizations caused a large migration of the white population into California, Florida, New Jersey, Arizona, and Maryland. These five States received more than four-fifths of the income shift from white migration. In each instance, the income generated added substantially to the State's income flow.

Table 5.—Industrial Breakdown of Income

(Millions of dollars)

|                           | Mining payrolls |             |            |                 |                     | Manufacturing payrolls |         |          |         |                      |                    |         |                              |                             |       |          |           |        |  |
|---------------------------|-----------------|-------------|------------|-----------------|---------------------|------------------------|---------|----------|---------|----------------------|--------------------|---------|------------------------------|-----------------------------|-------|----------|-----------|--------|--|
|                           | Metal           | Anthracite* | Bituminous | Crude petroleum | Non-metallic mining | Food                   | Tobacco | Textiles | Apparel | Lumber and furniture | Petroleum refining | Leather | Motor vehicles and equipment | Machinery except electrical | Paper | Printing | Chemicals | Rubber |  |
| United States.....        |                 |             |            |                 |                     |                        |         |          |         |                      |                    |         |                              |                             |       |          |           |        |  |
| New England.....          | -1              | (9)         | -1         | 1               | -32                 | -1                     | -377    | 11       | -3      | -13                  | 1                  | 29      | 14                           | -184                        | -113  | 9        | -18       | -28    |  |
| Maine.....                |                 |             |            | -1              |                     |                        | -30     | 3        |         | -18                  | (9)                | 39      | 1                            | -57                         | -35   | (9)      | (9)       |        |  |
| New Hampshire.....        |                 |             |            | (9)             | -1                  | -1                     | -20     | 1        |         | -2                   | (9)                | 15      | (9)                          | 11                          | -19   | 3        | 1         | 10     |  |
| Vermont.....              | -1              |             |            | 1               |                     |                        | -12     | -1       |         | -4                   | (9)                | 1       | (9)                          | -1                          | -4    | 2        | (9)       | -1     |  |
| Massachusetts.....        | (9)             | (9)         | 1          |                 | -28                 | (9)                    | -181    | 19       | -3      | -31                  | 14                 | 31      | 10                           | -27                         | -48   | -14      | -21       | -21    |  |
| Rhode Island.....         |                 |             |            | (9)             | -3                  |                        | -78     | 2        |         | 4                    | (9)                | 1       | (9)                          | -8                          | -4    | -1       | (9)       | -3     |  |
| Connecticut.....          |                 |             |            | 2               | 3                   | 1                      | -57     | -14      |         | 10                   | (9)                | 4       | (9)                          | -41                         | -5    | 19       | 31        | -5     |  |
| Midwest.....              | -6              |             | -33        | -23             | -19                 | -53                    | -50     | -232     | -589    | (9)                  | -33                | -41     | 82                           | -27                         | -139  | -147     | -316      | 23     |  |
| New York.....             | -8              |             | 1          | -5              | -3                  | -123                   | -7      | -16      | -531    | -26                  | -32                | -56     | 40                           | 28                          | -103  | -173     | -148      | -19    |  |
| New Jersey.....           | -6              | (9)         | 1          | 1               | 6                   | -20                    | -13     | -74      | -20     | 12                   | 1                  | 23      | 4                            | 18                          | 29    | 6        | 33        | 19     |  |
| Pennsylvania.....         | 8               |             | -32        | -24             | -15                 | -9                     | -30     | -112     | 77      | 0                    | -65                | 20      | -13                          | -80                         | -38   | -29      | -64       | 22     |  |
| Delaware.....             |                 |             | (9)        |                 |                     | (9)                    | 2       | 12       | 1       | -1                   | 5                  | 5       | 24                           | -5                          | -2    | 2        | 39        | -5     |  |
| Maryland.....             |                 |             | -2         | (9)             | 4                   | -8                     | (9)     | -22      | -4      | 9                    | 0                  | -4      | 25                           | -7                          | -23   | 14       | -7        | 12     |  |
| District of Columbia..... |                 |             |            |                 |                     | -9                     |         |          | (9)     | -2                   | (9)                |         | (9)                          | 1                           | -3    | 8        | (9)       |        |  |
| Great Lakes.....          | 4               |             | 14         | -24             | 1                   | -283                   | -12     | -7       | -39     | -43                  | 14                 | -46     | -296                         | -646                        | -74   | -96      | -84       | -132   |  |
| Michigan.....             | 3               |             | (9)        | -8              | 7                   | -26                    | -1      | -2       | -39     | -30                  | 0                  | -4      | -621                         | -63                         | -28   | -10      | -18       | 22     |  |
| Ohio.....                 | (9)             |             | 15         | 4               | 1                   | -28                    | -6      | 17       | -62     | -34                  | 18                 | -7      | 192                          | -213                        | -21   | -21      | -21       | -62    |  |
| Indiana.....              | 1               |             | 1          | 1               | -3                  | -32                    | -2      | -16      | -8      | 30                   | 18                 | 1       | 7                            | -94                         | 9     | 18       | -8        |        |  |
| Illinois.....             | 1               |             | -2         | -22             | -4                  | -308                   | -1      | (9)      | -82     | -13                  | 7                  | -23     | -63                          | -120                        | -12   | -103     | -38       | -1     |  |
| Wisconsin.....            | -1              |             |            |                 | (9)                 | 2                      | -1      | -6       | -4      | -27                  | 2                  | -7      | 64                           | -155                        | -6    | 13       | -5        | -12    |  |
| Piedmont.....             | -5              |             | 3          | -3              | 4                   | 29                     | -8      | -1       | -22     | (9)                  | 1                  | -13     | 94                           | 96                          | 87    | 11       | 36        |        |  |
| Minnesota.....            | 10              |             | (9)        | (9)             | 1                   | 41                     | -5      | -1       | -10     | -3                   | 1                  | 1       | 3                            | 73                          | 76    | 10       | 16        |        |  |
| Iowa.....                 |                 |             | (9)        | (9)             | 1                   | 41                     | -5      | -1       | -1      | -1                   | 1                  | 1       | 2                            | -15                         | 2     | 21       | 1         |        |  |
| Missouri.....             | -13             |             | 2          | (9)             | 1                   | 10                     | -6      | 0        | -20     | -4                   | 1                  | -13     | 61                           | 9                           | 4     | (9)      | 3         |        |  |
| North Dakota.....         |                 |             | 1          | 6               | (9)                 | 1                      |         |          | (9)     | -1                   | (9)                | (9)     | 1                            | 1                           | (9)   | (9)      | 1         |        |  |
| South Dakota.....         | 2               |             |            |                 | (9)                 | 3                      |         |          | 1       | 1                    | (9)                | (9)     | 2                            | 2                           | (9)   | (9)      | 1         |        |  |
| Nebraska.....             |                 |             |            | 5               | 2                   | 24                     |         | (9)      | 2       | 3                    | (9)                | (9)     | 6                            | 1                           | (9)   | 1        | 2         |        |  |
| Kansas.....               | -4              |             | (9)        | -19             | -1                  | -34                    |         |          | 5       | 4                    | (9)                | (9)     | 16                           | 16                          | 3     | 3        | 9         |        |  |
| Sea Coast.....            | -27             |             | 25         | 38              | -2                  | 234                    | 14      | 396      | 542     | 19                   | (9)                | 51      | 68                           | 339                         | 163   | 96       | 156       | 47     |  |
| Virginia.....             | (9)             |             | (9)        | (9)             | 1                   | 21                     | 16      | 31       | 30      | 28                   | 2                  | -1      | 19                           | 19                          | -6    | 14       | -32       |        |  |
| West Virginia.....        |                 |             | -1         | -4              | -1                  | 10                     | 3       | 14       | 2       | -16                  | -7                 | -1      | 1                            | 9                           | -2    | -2       | -16       |        |  |
| Kentucky.....             |                 |             | 14         | (9)             | 2                   | 17                     | 20      | (9)      | 27      | -11                  | 2                  | (9)     | 23                           | 63                          | 10    | 4        | 41        |        |  |
| Tennessee.....            | (9)             |             | (9)        | (9)             | 5                   | 10                     | -2      | 28       | 89      | 39                   | 2                  | (9)     | 16                           | 16                          | 21    | 13       | -22       |        |  |
| North Carolina.....       | 2               |             | (9)        | (9)             | 3                   | 25                     | 45      | 254      | 87      | 78                   | 1                  | (9)     | 4                            | 22                          | 11    | 15       | 30        |        |  |
| South Carolina.....       |                 |             | (9)        | (9)             | 1                   | 3                      | -1      | 174      | 73      | -6                   | (9)                | (9)     | 22                           | 22                          | 8     | 4        | 79        |        |  |
| Georgia.....              |                 |             | (9)        | (9)             | 1                   | 50                     | 1       | 92       | 82      | -13                  | 2                  | (9)     | 34                           | 10                          | 58    | 8        | 6         |        |  |
| Florida.....              | -2              |             |            | 1               | 1                   | 56                     | 10      | 2        | 26      | 11                   | 3                  | 4       | 3                            | 31                          | 28    | 24       | 37        |        |  |
| Alabama.....              | -25             |             | 1          | 1               | 1                   | 20                     | 1       | (9)      | 62      | -26                  | 4                  | 3       | 3                            | 18                          | 27    | 4        | 13        |        |  |
| Mississippi.....          |                 |             |            | 6               | 3                   | 15                     |         | (9)      | 49      | -25                  | 4                  | 6       | 3                            | 0                           | 12    | 1        | -4        |        |  |
| Louisiana.....            |                 |             |            | 90              | 3                   | -2                     | -2      | (9)      | 31      | -32                  | 1                  | (9)     | -1                           | 3                           | -23   | -1       | 6         |        |  |
| Arkansas.....             | -5              |             | 3          | -8              | -3                  | 21                     |         | 3        | 3       | -2                   | 12                 | 12      | -1                           | 14                          | 13    | 4        | 14        |        |  |
| Southwest.....            | 42              |             | 14         | 16              | -7                  | 3                      | (9)     | 3        | 71      | (9)                  | 17                 | 4       | 34                           | 142                         | 36    | 32       | 147       |        |  |
| Oklahoma.....             | -7              |             | (9)        | -12             | -7                  | 15                     | 1       | 1        | 9       | (9)                  | 15                 | 2       | 2                            | 17                          | 2     | -4       | 2         |        |  |
| Texas.....                | -3              |             | (9)        | 13              | -7                  | 12                     | (9)     | 0        | 65      | (9)                  | 20                 | (9)     | 2                            | 89                          | 27    | 24       | 154       |        |  |
| New Mexico.....           | 17              |             | 1          | 16              | -1                  | 12                     |         | (9)      | 8       | (9)                  | 2                  | (9)     | (9)                          | 1                           | 2     | 2        | -1        |        |  |
| Arizona.....              | 25              |             |            | 1               | -1                  | 2                      |         |          | 8       | 10                   | (9)                | (9)     | (9)                          | 35                          | 2     | 2        | 1         |        |  |
| Rocky Mountain.....       | 3               |             | 14         | 22              | -2                  | 27                     | -5      |          | 4       | 37                   | 14                 | 7       | 2                            | 17                          | 9     | 15       | 24        |        |  |
| Montana.....              | -15             |             | (9)        | (9)             | 1                   | -2                     |         | (9)      | 4       | 17                   | 7                  |         | 1                            | -1                          | 2     | (9)      | (9)       |        |  |
| Idaho.....                | -13             |             |            | (9)             | 1                   | 15                     |         |          | 9       | 9                    | 1                  |         | 1                            | 2                           | 6     | (9)      | (9)       |        |  |
| Wyoming.....              | 6               |             | (9)        | (9)             | 1                   | -1                     |         |          | 1       | 1                    | 1                  |         | (9)                          | 7                           | 3     | (9)      | (9)       |        |  |
| Colorado.....             | 14              |             | 1          | 20              | -2                  | 14                     |         | 3        | (9)     | 5                    | 5                  | 7       | (9)                          | 7                           | 3     | 10       | -1        |        |  |
| Utah.....                 | 12              |             | 2          | 9               | 2                   | 2                      |         | -1       | (9)     | 3                    | 4                  |         | (9)                          | 9                           | (9)   | 1        | 2         |        |  |
| Pac West.....             | -16             |             | 14         | 44              | 0                   | 117                    | -5      | 14       | 37      | 16                   | 58                 | 4       | 181                          | 238                         | 67    | 90       | 47        |        |  |
| Washington.....           | -2              |             | 2          | (9)             | 0                   | 20                     |         | 1        | 4       | -63                  | 8                  | -1      | 1                            | 2                           | -6    | -2       | -23       |        |  |
| Oregon.....               | (9)             |             | (9)        | (9)             | 3                   | (9)                    |         | 1        | 2       | -24                  | (9)                | -1      | 1                            | 2                           | -4    | -6       | -1        |        |  |
| Nevada.....               | -1              |             |            | (9)             | 1                   | (9)                    |         |          |         | -1                   | (9)                | (9)     | (9)                          | 1                           | 2     | 2        | 7         |        |  |
| California.....           | -7              |             | (9)        | -85             | 12                  | 330                    | -3      | 12       | 31      | 109                  | 32                 | 0       | 89                           | 283                         | 73    | 101      | 66        |        |  |

\* Because entire industry is in Pennsylvania there is no regional share effect.  
 † These data represent an industrial distribution of totals in column C, table 3.  
 ‡ Consists of the sum of payrolls, other labor income, and proprietors' income.

\* Includes proprietors' incomes and other labor income in mining and manufacturing and participation income in a number of minor industries.  
 † Less than \$500,000.

Finally, in a number of States the migration of whites appeared to reflect the oft-noted movement of population from central cities to the suburbs. This is a partial explanation of the below-average income rise in New York and the District of Columbia, and the above-average gains in Connecticut, New Jersey, Maryland, Virginia, and Ohio. In each of these States, the presence of large cities, on or near their

borders, appears to hold the basic explanation.

#### Migration from abroad

Net migration from abroad added to the income flow in every State, but because the flow of immigrants channeled disproportionately into selected States, its impact on the geographic distribution of income was significant. In particular, migrants from abroad

boosted the income flow in New York and California. By their failure to enter the States of the Southeast and Plains in appreciable numbers, immigration from abroad tended to reduce the income share of those regions relative to that of other areas.

#### Effects of natural increase

The last component of population change is natural increase—the excess

Change Due to Regional-Share Effects, 1948-62<sup>1</sup>

(Millions of dollars)

|                      | Manufacturing payrolls—Continued |  |                               |             |                 | Participation income <sup>2</sup> |                |       |              |                                    |          |         |                 |                  |          | Other <sup>3</sup> | Total all industries |
|----------------------|----------------------------------|--|-------------------------------|-------------|-----------------|-----------------------------------|----------------|-------|--------------|------------------------------------|----------|---------|-----------------|------------------|----------|--------------------|----------------------|
|                      | Stone, clay and glass            | Ordinance, primary and fabricated metals | Instruments and miscellaneous | Electronics | Non-electronics | Agriculture                       | Transportation | Trade | Construction | Communication and public utilities | Services | Finance | Government      |                  |          |                    |                      |
|                      |                                  |  |                               |             |                 |                                   |                |       |              |                                    |          |         | State and local | Federal civilian | Military |                    |                      |
| United States        |                                  |  |                               |             |                 |                                   |                |       |              |                                    |          |         |                 |                  |          |                    |                      |
| New England          | -4                               | -267                                     | -184                          | -154        | 244             | -95                               | -33            | -230  | -17          | -73                                | 30       | -359    | -340            | -24              | 44       | -27                | -1,703               |
| Maine                | 1                                | (9)                                      | (9)                           | 8           | 3               | -30                               | -3             | -31   | -23          | -6                                 | -32      | -2      | -40             | 6                | 44       | -10                | -190                 |
| New Hampshire        | (9)                              | 1  | (9)                           | 55          | (9)             | -6                                | -4             | 2     | 6            | -7                                 | 7        | 4       | -22             | 4                | 12       | (9)                | 34                   |
| Vermont              | -10                              | -1                                       | -6                            | 21          | 4               | -5                                | -6             | (9)   | 2            | -4                                 | -3       | (9)     | -8              | -5               | -1       | (9)                | -47                  |
| Massachusetts        | -7                               | -34                                      | -122                          | 16          | -27             | -16                               | -172           | -54   | -66          | 116                                | -68      | -232    | -26             | -8               | -8       | (9)                | -1,200               |
| Rhode Island         | 4                                | -48                                      | -28                           | 18          | (9)             | -3                                | -37            | -5    | -21          | -43                                | -15      | -7      | -8              | -8               | -8       | (9)                | -298                 |
| Connecticut          | 2                                | -207                                     | -84                           | -129        | 230             | -15                               | -1             | 119   | 59           | 7                                  | 47       | (9)     | 9               | 8                | -5       | 7                  | -28                  |
| Middle West          | -106                             | -690                                     | -754                          | -933        | -189            | -192                              | -1,230         | -147  | -258         | -748                               | -1,074   | -340    | -245            | -428             | 30       | -9,548             |                      |
| New York             | 3                                | -125                                     | -167                          | -142        | -146            | -85                               | -974           | 81    | -192         | -804                               | -773     | -664    | -239            | -111             | 13       | -5,602             |                      |
| New Jersey           | 3                                | -31                                      | -5                            | -209        | -209            | -14                               | 148            | 252   | 42           | -6                                 | 224      | -71     | -1              | 62               | -158     | 10                 | 0                    |
| Pennsylvania         | -123                             | -706                                     | -307                          | -307        | -307            | -34                               | -678           | -232  | -39          | -252                               | -193     | -288    | -28             | -87              | 3        | -4,026             |                      |
| Delaware             | 1                                | -6                                       | -2                            | 2           | -8              | 3                                 | -18            | 30    | 26           | 6                                  | 19       | -8      | 14              | 6                | 29       | -1                 | 160                  |
| Maryland             | 6                                | 172                                      | 10                            | -38         | -265            | -4                                | 36             | 186   | 36           | 19                                 | 151      | 22      | 139             | 315              | -14      | 4                  | 787                  |
| District of Columbia | -1                               | -1                                       | 1                             | -1          | 3               | -22                               | -183           | -40   | -39          | -106                               | -61      | -60     | -617            | -84              | -84      | -9                 | -1,117               |
| Great Lakes          | -89                              | -515                                     | -23                           | -918        | -439            | -430                              | -965           | -536  | -133         | -651                               | -240     | -450    | -132            | -94              | 51       | -8,490             |                      |
| Michigan             | -8                               | -58                                      | -17                           | -126        | -61             | -6                                | -291           | -180  | -9           | -126                               | -49      | -132    | 9               | 29               | 9        | -1,832             |                      |
| Ohio                 | -59                              | -406                                     | -30                           | -484        | -178            | -66                               | -153           | -210  | -84          | -84                                | -10      | -54     | 18              | -13              | 9        | -1,896             |                      |
| Indiana              | -6                               | 39                                       | -2                            | -137        | -84             | -49                               | -40            | -106  | 15           | -60                                | -26      | -35     | -42             | -3               | 10       | 20                 | -679                 |
| Illinois             | 3                                | -305                                     | -23                           | -233        | -210            | -11                               | -411           | -98   | -138         | -257                               | -206     | -785    | -126            | -125             | 13       | -3,432             |                      |
| Wisconsin            | 11                               | -28                                      | -9                            | -28         | -28             | 3                                 | -70            | 1     | -10          | -14                                | -9       | -20     | -30             | -30              | 2        | -361               |                      |
| Plains               | -34                              | 55                                       | 50                            | 35          | 184             | -289                              | -40            | -233  | 115          | 22                                 | -94      | 20      | -206            | -123             | 198      | 12                 | -268                 |
| Minnesota            | -29                              | 14                                       | 79                            | -3          | -6              | -159                              | -15            | -102  | 44           | 37                                 | 37       | 10      | -30             | -26              | 6        | 6                  | -68                  |
| Iowa                 | 1                                | 31                                       | -4                            | -3          | -12             | -346                              | -38            | -117  | -72          | -20                                | -5       | -45     | (9)             | -4               | -4       | (9)                | -282                 |
| Missouri             | -27                              | -17                                      | 10                            | -9          | 105             | -72                               | 21             | -155  | 11           | 8                                  | -87      | -33     | -22             | -60              | 77       | -290               |                      |
| North Dakota         | 1                                | -1                                       | (9)                           | 194         | -4              | -10                               | 24             | -2    | 3            | 3                                  | -4       | 13      | -31             | -8               | 36       | (9)                | 284                  |
| South Dakota         | (9)                              | 2  | 2                             | 2           | 17              | 6                                 | -2             | 63    | 3            | 3                                  | -1       | 8       | -38             | 1                | 1        | 1                  | 96                   |
| Nebraska             | 2                                | 31                                       | 4                             | 14          | 20              | -5                                | -28            | 25    | 3            | 3                                  | -1       | 8       | -31             | -20              | 46       | 6                  | 86                   |
| Kansas               | 16                               | 5  | (9)                           | -5          | 110             | -2                                | -26            | 13    | 33           | -7                                 | -17      | 22      | -5              | -5               | 27       | -5                 | 182                  |
| Southeast            | 89                               | 335                                      | 86                            | 359         | 401             | 48                                | 1,326          | 399   | 195          | 138                                | 637      | 512     | 425             | -51              | -22      | 7,189              |                      |
| Virginia             | 3                                | 25                                       | 9                             | 64          | -37             | -5                                | 180            | 94    | 32           | 142                                | 33       | 31      | 177             | -241             | -241     | -79                | 604                  |
| West Virginia        | -59                              | -23                                      | -1                            | -23         | -14             | -32                               | -36            | -66   | -25          | -72                                | -14      | -78     | -14             | -14              | -14      | -1                 | -949                 |
| Kentucky             | 2                                | -17                                      | -4                            | 39          | -1              | 26                                | -57            | -35   | 50           | -38                                | 6        | 40      | 0               | -75              | -1       | -1                 | 172                  |
| Tennessee            | 17                               | 7  | 11                            | 59          | -27             | -27                               | 28             | -27   | 5            | -40                                | -5       | 22      | -36             | -14              | 1        | 1                  | 137                  |
| North Carolina       | 13                               | 34                                       | 30                            | 70          | 2               | 303                               | 70             | 177   | 12           | 31                                 | -20      | 70      | 106             | -4               | 14       | 4                  | 2,412                |
| South Carolina       | 16                               | 13                                       | 16                            | 12          | -4              | 15                                | -3             | 88    | 12           | 18                                 | -5       | 43      | 4               | -46              | 2        | 2                  | 478                  |
| Georgia              | 17                               | 19                                       | 7                             | 10          | 309             | 80                                | 164            | 7     | 8            | -64                                | 61       | 65      | 64              | 140              | 140      | 1                  | 1,239                |
| Florida              | 35                               | 185                                      | 15                            | 53          | 340             | 46                                | 703            | 172   | 88           | 347                                | 294      | 280     | 75              | 71               | 71       | 6                  | 3,449                |
| Alabama              | (9)                              | 5  | 13                            | -30         | -33             | -60                               | 37             | 27    | 23           | -33                                | 19       | -9      | 222             | 25               | -14      | 45                 | 332                  |
| Mississippi          | 8                                | 30                                       | 9                             | 20          | -90             | -4                                | 30             | 10    | 12           | -90                                | 32       | 34      | 44              | -50              | 60       | -12                | 246                  |
| Louisiana            | 8                                | 65                                       | 8                             | -26         | -9              | 18                                | 35             | -10   | 6            | 6                                  | 34       | 44      | -50             | 60               | -12      | 246                |                      |
| Arkansas             | 4                                | 19                                       | 8                             | 26          | 3               | -34                               | 3              | -38   | 24           | 3                                  | -38      | 13      | -5              | -5               | 10       | -3                 | 71                   |
| Southwest            | 54                               | 230                                      | 35                            | 185         | 134             | 311                               | 39             | 538   | -88          | 121                                | 240      | 298     | 275             | 260              | 264      | -85                | 3,481                |
| Oklahoma             | 7                                | 17                                       | 4                             | 24          | 23              | -74                               | 16             | -15   | -7           | -5                                 | -10      | 7       | -10             | 42               | 41       | -8                 | 47                   |
| Texas                | 35                               | 139                                      | 27                            | 112         | 60              | 246                               | 78             | 301   | -238         | 61                                 | 178      | 134     | 110             | 179              | 179      | -95                | 1,771                |
| New Mexico           | 2                                | 10                                       | (9)                           | 4           | 14              | 27                                | 6              | 66    | 16           | 33                                 | 83       | 41      | 80              | 62               | 33       | (9)                | 492                  |
| Arizona              | 10                               | 48                                       | 4                             | 44          | 47              | 112                               | (9)            | 184   | 171          | 32                                 | 163      | 73      | 101             | 60               | 30       | 3                  | 1,171                |
| Rocky Mountain       | 18                               | 160                                      | 10                            | 14          | 32              | 29                                | 8              | 150   | 383          | 12                                 | 138      | 38      | 82              | 87               | 35       | -16                | 1,288                |
| Montana              | (9)                              | -2                                       | (9)                           | (9)         | (9)             | -13                               | -13            | -39   | 24           | 2                                  | -11      | 3       | -4              | -4               | 21       | -4                 | 27                   |
| Idaho                | 2                                | -2                                       | (9)                           | 2           | 19              | 10                                | -3             | -34   | 31           | (9)                                | 11       | 4       | -8              | -4               | -4       | (9)                | 24                   |
| Wyoming              | 1                                | 1  | (9)                           | 1           | 1               | -10                               | -10            | -9    | -9           | 8                                  | -12      | 3       | 7               | -10              | -12      | (9)                | -80                  |
| Colorado             | 12                               | 128                                      | 8                             | 16          | -48             | 19                                | 103            | 110   | 20           | 116                                | 64       | 75      | 52              | 05               | 4        | (9)                | 208                  |
| Utah                 | 4                                | 36                                       | 2                             | 71          | -1              | 1                                 | 40             | 40    | 1            | 14                                 | 14       | 14      | 23              | 4                | 4        | -1                 | 312                  |
| Pac West             | 41                               | 1,628                                    | 137                           | 1,108       | 736             | 438                               | 254            | 843   | 187          | 87                                 | 919      | 416     | 358             | -64              | -47      | 43                 | 7,978                |
| Washington           | -3                               | 18                                       | 1                             | 8           | 828             | -7                                | 2              | -46   | -179         | -27                                | -77      | -23     | 15              | -102             | -49      | -13                | -294                 |
| Oregon               | 18                               | 18                                       | (9)                           | 26          | (9)             | -14                               | 11             | -82   | -6           | -84                                | -1       | 18      | -7              | 4                | 4        | -1                 | -201                 |
| Nevada               | 3                                | 18                                       | (9)                           | 26          | (9)             | -14                               | 11             | -82   | -6           | -84                                | -1       | 18      | -7              | 4                | 4        | -1                 | -201                 |
| California           | 60                               | 896                                      | 136                           | 1,152       | 369             | 404                               | 234            | 910   | 945          | 307                                | 876      | 303     | 224             | 33               | 33       | -32                | 7,981                |

NOTE.—Figures are not available for Alaska and Hawaii because of their exclusion from State series in 1948 (prior to Statehood). Detail will not add to totals due to rounding.

Source: U.S. Department of Commerce, Office of Business Economics.

of births over deaths. Population growth throughout the Nation helped swell the flow of income. In percentage terms, however, there were differences in rates of increase which made for regional unevenness in the income flow from this source.

The impact of natural increase on the geographic distribution of income was much the same as was that of the migration of the white population. In the northeastern section of the Nation, and to a lesser extent in the Great Lakes and Plains States, the natural increase in population added a less-than-average amount to total income. This reflected a decline in birth rates as well as the previously noted outmigration of the white population from these areas in earlier years. In other regions, income gains due to natural increase gave an extra impetus to income growth but only in the more rural regions such as the Southeast, Southwest, and Rocky Mountain areas was the push a substantial one.

### Changes in Per Capita Income

So far, economic growth has been examined in terms of total income. Changes in this measure reflect changes in the economic size of an area, but size is only one aspect of growth. Equally important is per capita income, the best indicator of economic welfare available.

There has been sharp convergence toward the national average in the movement of State per capita incomes throughout the country since 1929, but the slope of the trend toward geographic equality in average incomes has varied considerably. The extent of the reduction in inequality can be measured by changes in the coefficient of variation, i.e., the mean difference between average income in each State and the Nation without regard to sign, weighted by population, and computed as a percent of national per capita income. This measure is shown below for selected years over the past three and a half decades.

|           |    |           |    |
|-----------|----|-----------|----|
| 1929..... | 32 | 1948..... | 19 |
| 1940..... | 26 | 1953..... | 19 |
| 1944..... | 23 | 1957..... | 18 |
| 1948..... | 18 | 1963..... | 16 |

### Income differentials narrow

Since 1929, the coefficient of variation has been cut in half. But two-thirds of this reduction was concentrated in the war and reconversion years—as may be seen in the shaded portion of the chart on page 25. In 1940, relative dispersion was only a little less than in 1929; between 1940 and 1946, it contracted sharply; from 1946 to 1963—a span of 17 years—inequality was reduced by only 2 percentage points—from 18 percent to 16 percent.

In summary, most of the substantial reduction in inequality in regional per capita incomes was accomplished during the war years; since then, convergence, though continuing, has been at a much slower rate. An explanation of this, though a partial one, lies in the difference of the nature of the relative shifts in total income before and after 1948.

### Changes during World War II

During World War II, when most of the reduction in regional differentials in per capita incomes occurred, relative changes in population tended to be comparatively uniform in most parts of the country. As a result, the large shifts in the geographic distribution of total income were translated directly into relative changes in per capita income differentials.

In the two southern regions there was a sharp increase in the utilization of existing labor resources. The huge demand occasioned by the war for nearly all types of goods and services stimulated production in the South on a relative basis more than elsewhere. Both employment and productivity rose but there was little change in population. A major factor in this respect was the use of these regions for military training purposes. The presence of military personnel here added to the income flow, but since dependents generally did not accompany persons on active duty during the war, the increase in population was smaller than that which usually ac-

companies increases in the labor force. In addition, the numerous Federal military installations activated throughout the two regions boosted demand for local goods and services, thereby providing another stimulus to demand.

In the Plains and Rocky Mountain States as well as in the South, income from agriculture soared from its position of semi-depression in 1940, to full utilization of agricultural capacity within a few years. Increased farm production in real terms, together with substantial increases in prices received by farmers, were transmitted directly into relative gains in total and per capita incomes.

The same factors were operating throughout the Nation, of course, but because there was less unused and under-utilized capacity outside of the South and the agricultural Plains and Rocky Mountain areas, incomes did not move up so sharply elsewhere.

### Changes since 1948

Since 1948, however, the major force making for shifts in the geographic distribution of total income has been differential population growth. This has led to broad stability in per capita income differentials throughout the Nation. The most striking example of average income stability in the face of sweeping economic developments since World War II is afforded by the experiences of California and West Virginia.

In California, total income tripled between 1948 and 1963—an increase of one-third in its share of the national total. Over the same period, aggregate income in West Virginia rose by one-half—a loss of nearly one-third in its share of the Nation's total. Accompanying these changes in total income were major population shifts. California's population rose 7½ million, while West Virginia lost 121,000 residents. Yet, in 1963, per capita income in each State stood at about the same point in relation to the national average as it had 15 years earlier.

(Continued on page 32)

## Factors Underlying Changes in the Distribution of Income

(Continued from page 30)

Even though the reduction in per capita income differentials has lessened over the last decade and a half, there are several instances in which average income appears to be related more to income developments than to population shifts.

The record high volume of farm income reached in the period 1947-49 pushed per capita income unusually high in the Plains and Rocky Mountains. With the relative decline in farm income from this high point the 1948-63 trend in per capita income has been downward even though population declined somewhat relative to the national growth rate.

In the Southeast, there was a continuous improvement in the level of per capita income. In part, this appears to have been due to a basic improvement in the region's income structure, and, in part, the result of outmigration of a large number of Negroes with their less-than-average incomes. It is interesting to note that whereas the national measure of inequality declined by 12 percent from 1948 to 1963, the Southeast reduced the margin by which its per capita income fell short of that in the Nation by one-fifth. Moreover, the region's most recent experience indicates no diminution in this rate. Indeed, since 1957, there has been some step-up in the rate at which average incomes in the Southeast have been increasing relative to those in the Nation, generally.

Both population and total income in the New England States have been expanding at below-average rates, but the lag has been greatest in population. Almost a decade and a half ago the decline in per capita income in the region, relative to the Nation, was halted. Since 1948, average incomes have risen from a point 6 percent above the national average to one 13 percent above it.

## NEW OR REVISED STATISTICAL SERIES

Department Store Inventories: New Data for Pages S-11 and S-12<sup>1</sup>

(Millions of dollars)

| Year                | Jan.  | Feb.  | Mar.  | Apr.  | May   | June  | July  | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Unadjusted          |       |       |       |       |       |       |       |       |       |       |       |       |
| 1958                |       |       |       |       |       |       |       |       |       |       |       | 1,574 |
| 1957                | 1,552 | 1,600 | 1,811 | 1,873 | 1,827 | 1,745 | 1,735 | 1,795 | 1,648 | 2,097 | 2,122 | 1,684 |
| 1956                | 1,545 | 1,725 | 1,822 | 1,861 | 1,825 | 1,781 | 1,738 | 1,810 | 1,652 | 2,159 | 2,185 | 1,723 |
| 1955                | 1,747 | 1,830 | 1,950 | 2,033 | 1,980 | 1,909 | 1,934 | 2,036 | 2,176 | 2,236 | 2,378 | 1,924 |
| 1954                |       |       |       |       |       |       |       |       |       |       |       |       |
| 1953                | 1,900 | 1,969 | 2,145 | 2,140 | 2,116 | 2,032 | 2,026 | 2,141 | 2,275 | 2,409 | 2,462 | 1,930 |
| 1952                | 1,880 | 1,852 | 2,093 | 2,157 | 2,126 | 2,017 | 2,044 | 2,147 | 2,327 | 2,458 | 2,470 | 2,077 |
| 1951                | 2,043 | 2,119 | 2,384 | 2,380 | 2,367 | 2,271 | 2,277 | 2,394 | 2,546 | 2,754 | 2,749 | 2,205 |
| 1950                | 2,205 | 2,309 | 2,473 | 2,536 | 2,515 | 2,399 | 2,414 | 2,515 | 2,704 | 2,852 | 3,046 | 2,392 |
| 1949                | 2,394 | 2,465 |       |       |       |       |       |       |       |       |       |       |
| Seasonally adjusted |       |       |       |       |       |       |       |       |       |       |       |       |
| 1958                |       |       |       |       |       |       |       |       |       |       |       | 1,725 |
| 1957                | 1,764 | 1,772 | 1,813 | 1,827 | 1,832 | 1,834 | 1,836 | 1,831 | 1,804 | 1,945 | 1,967 | 1,844 |
| 1956                | 1,555 | 1,639 | 1,824 | 1,821 | 1,853 | 1,843 | 1,832 | 1,834 | 1,806 | 1,995 | 1,990 | 1,859 |
| 1955                | 1,938 | 1,949 | 1,952 | 1,945 | 1,930 | 1,909 | 1,935 | 2,034 | 2,167 | 2,234 | 2,361 | 2,105 |
| 1954                |       |       |       |       |       |       |       |       |       |       |       |       |
| 1953                | 2,116 | 2,125 | 2,144 | 2,106 | 2,124 | 2,129 | 2,138 | 2,132 | 2,138 | 2,138 | 2,137 | 2,098 |
| 1952                | 2,073 | 2,056 | 2,089 | 2,121 | 2,106 | 2,123 | 2,147 | 2,156 | 2,166 | 2,159 | 2,159 | 2,253 |
| 1951                | 2,290 | 2,350 | 2,347 | 2,340 | 2,360 | 2,388 | 2,362 | 2,390 | 2,399 | 2,441 | 2,410 | 2,466 |
| 1950                | 2,473 | 2,450 | 2,468 | 2,450 | 2,502 | 2,515 | 2,535 | 2,531 | 2,536 | 2,590 | 2,654 | 2,604 |
| 1949                | 2,601 | 2,648 |       |       |       |       |       |       |       |       |       |       |

<sup>1</sup> New series starting in Feb. 1964 based on panel of department stores reporting to the Bureau of the Census. The seasonal adjustments and the monthly interpolations between Feb. 1964 and earlier Dec. figures from the Retail Trade Annual Reports are based on sample data formerly collected by the Federal Reserve System.

Source: U.S. Department of Commerce, Bureau of the Census and Office of Business Economics.

## Shipments of Asphalt and Tar Roofing and Siding Products: Revised Data for Page S-36

| Year and month       | Asphalt roofing |                            |                     | Asphalt siding | Insulated siding | Saturated felts |
|----------------------|-----------------|----------------------------|---------------------|----------------|------------------|-----------------|
|                      | Total           | Roll roofing and cap sheet | Shingles, all types |                |                  |                 |
| Thousands of squares |                 |                            |                     |                |                  |                 |
| Thousand short tons  |                 |                            |                     |                |                  |                 |
| 1962                 |                 |                            |                     |                |                  |                 |
| January              | 5,024           | 1,749                      | 3,275               | 72             | 32               | 42              |
| February             | 2,723           | 950                        | 1,773               | 37             | 38               | 49              |
| March                | 3,544           | 1,377                      | 2,167               | 60             | 59               | 76              |
| April                | 4,376           | 1,634                      | 2,742               | 50             | 79               | 80              |
| May                  | 5,125           | 1,850                      | 3,275               | 58             | 102              | 85              |
| June                 | 4,983           | 2,103                      | 2,880               | 61             | 99               | 81              |
| July                 | 5,115           | 2,304                      | 2,812               | 67             | 90               | 85              |
| August               | 5,784           | 2,470                      | 3,314               | 81             | 116              | 94              |
| September            | 5,271           | 2,394                      | 2,877               | 80             | 100              | 87              |
| October              | 7,277           | 2,826                      | 4,451               | 96             | 109              | 100             |
| November             | 6,205           | 1,932                      | 4,273               | 75             | 84               | 85              |
| December             | 3,732           | 1,215                      | 2,517               | 57             | 51               | 64              |
| Monthly average      | 3,367           | 1,913                      | 1,454               | 67             | 77               | 83              |
| 1963                 |                 |                            |                     |                |                  |                 |
| January              | 4,298           | 1,583                      | 2,715               | 68             | 41               | 55              |
| February             | 3,252           | 922                        | 2,330               | 52             | 30               | 48              |
| March                | 3,521           | 1,453                      | 2,068               | 45             | 49               | 67              |
| April                | 5,077           | 2,075                      | 3,002               | 57             | 76               | 89              |
| May                  | 6,025           | 2,311                      | 3,714               | 62             | 84               | 93              |
| June                 | 5,309           | 2,167                      | 3,142               | 58             | 81               | 88              |
| July                 | 7,084           | 2,745                      | 4,339               | 75             | 93               | 109             |
| August               | 6,054           | 2,602                      | 3,452               | 78             | 100              | 95              |
| September            | 5,419           | 2,450                      | 2,969               | 81             | 83               | 88              |
| October              | 7,114           | 2,784                      | 4,330               | 102            | 102              | 104             |
| November             | 4,604           | 1,810                      | 2,794               | 83             | 68               | 74              |
| December             | 3,103           | 1,214                      | 1,889               | 52             | 57               | 60              |
| Monthly average      | 5,472           | 2,000                      | 3,472               | 68             | 70               | 83              |

Source: U.S. Department of Commerce, Bureau of the Census.

NOTE.—See also new data for building permits on page S-2.